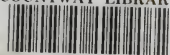


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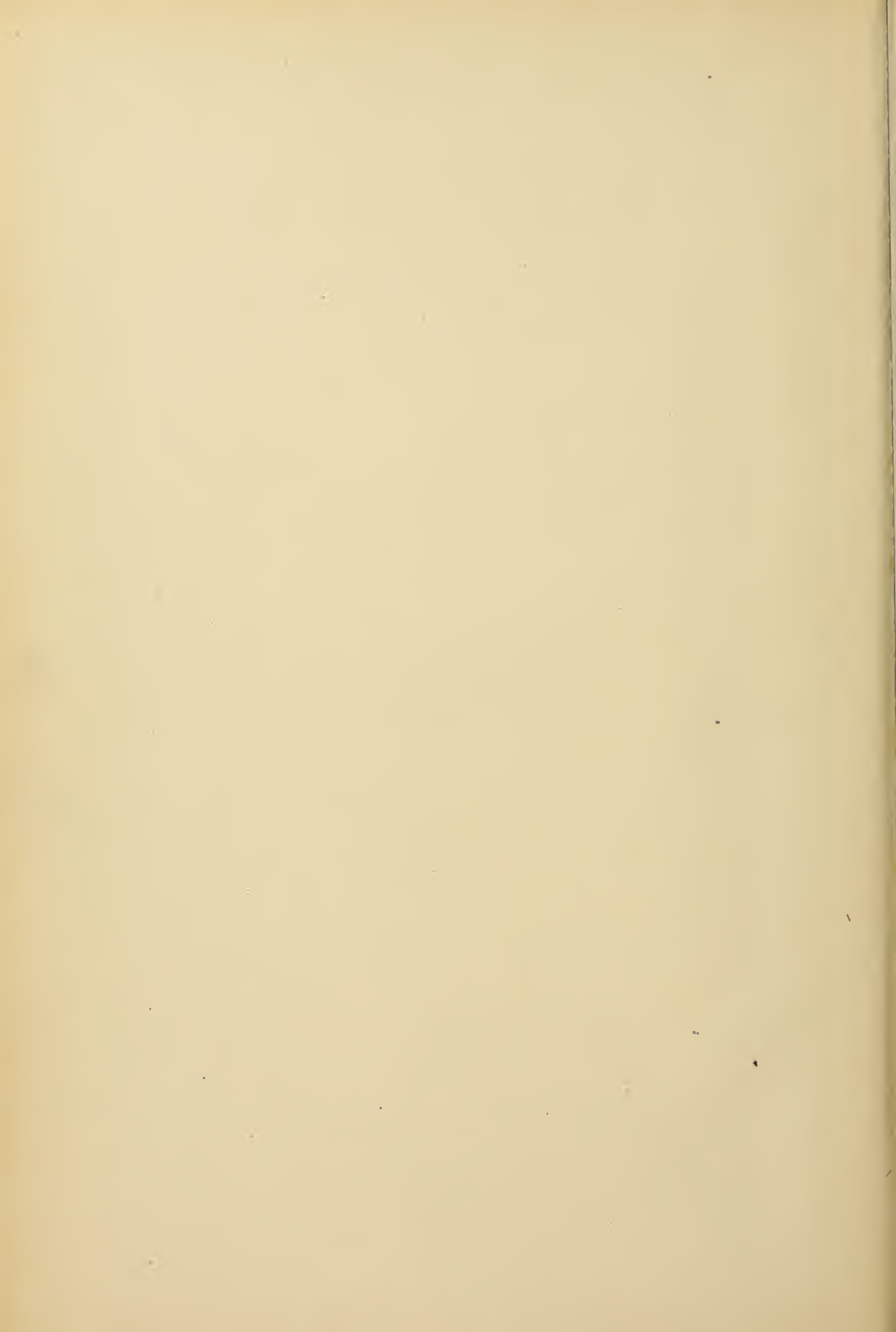
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# The Journal

of the

## Michigan State Medical Society

The Official Organ of the State and County Medical Societies.

PUBLISHED MONTHLY UNDER THE DIRECTION OF THE COUNCIL.

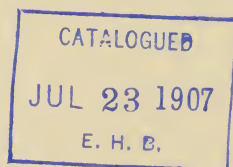
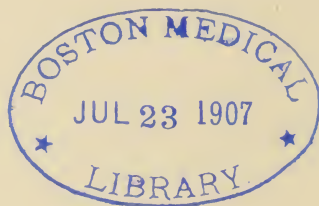
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Vol. V

January to December, 1906

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B. R. SCHENCK, M. D., EDITOR  
DETROIT





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# The Journal of the Michigan State Medical Society

PUBLISHED UNDER THE DIRECTION OF THE COUNCIL

VOL. V

DETROIT, MICHIGAN, JANUARY, 1906

NO. 1

## Original Articles

### GANGRENE OF THE SCROTUM.\*

A. W. HORNBOKEN,  
Marquette.

When requested to prepare a paper to be read before this society, now in session, it was my original intention to write an article treating of Gangrene of the Scrotum. But in the June number of the *Annals of Surgery* Dr. Albert Whiting, of Philadelphia, gives a paper read by him before the Philadelphia Academy of Surgery, Feb. 6th, 1905, in which this subject is treated so exhaustively that it seems quite needless for me to go into detail as to the general classification and etiology of the disease. Owing to this, and the fact that his paper has probably been read by the majority of physicians, I am unable to follow out my original intention, and will therefore report to you two cases of this disease coming recently under my observation.

The first case is one of fulminating gangrene. Koenig describes this variety as being of rapid and severe onset, and of short duration. Pronounced swelling and oedema, together with redness and emphysema of the scrotum, sets in within a few days. At the same time a high septic fever is present, which often

proves fatal before gangrene of the parts become pronounced.

CASE 1.—Wm. B., age 22, occupation boilermaker, robust health, family and personal history, together with habits, good. I was called on Friday, April 8th, 1904. The patient had had a chill, followed by temperature of 102.5, headache, and pain in limbs. Being unable after physical examination to find any real cause for these symptoms, and owing to the prevalence of la grippe at the time, I prescribed a dose of calomel, followed by salts.

Saturday the patient arose and was about the house all day, and ate three meals. Word was sent me that it would not be necessary to call again.

On Sunday evening, April 10th, 9 P. M., I was called and found patient with a temperature of 105°, pulse 120. Examination of chest and abdomen again proved negative, but on questioning he had an abrasion of the scrotum, and it felt uncomfortable. Inspection showed considerable swelling, and a purplish red discoloration over the lower one-half, and a small black spot about the size of a dime on the most dependent part of the scrotum. I ordered hot boracic acid

\*Read by title at the Annual Meeting of the Michigan State Medical Society at Petoskey, 1905, and approved for publication by the Committee on Publication of the Council.

dressing with alcohol to be applied, and scrotum supported by towels, calomel followed by salts, sponge baths for fever.

On Monday, April 11th, the morning temperature was 102.5. During the afternoon it rose to 106.5. The discoloration had extended over the entire scrotum, the black spot had increased in size. Tuesday, April 12th, the highest temperature recorded was 105. The discoloration and oedema had extended to the penis, which was very much swollen, rendering urination difficult. The patient was delirious.

The temperature on Wednesday, the 13th, was 104; this was the highest for the day. During the night he had a chill, and the patient was so delirious as to require two or three persons to hold him in bed. On the 14th he was quiet, but extremely weak. At 11:30 A. M. he had a hemorrhage from the nose, mouth and throat, and was found in a state of collapse a few moments later. Strychnia sulph. was given hypodermatically, also a dose of antistreptococci serum. On Friday, the 15th, I found that the patient had had a good night, delirium was almost entirely absent, but the gangrenous odor was very pronounced and the sheath of the penis was now black. Another injection of the serum was given. Hemorrhage from the nose. Temperature 103. Saturday, the 16th, the patient spent a good night, no delirium, temperature 102.8. Nourishment freely taken. On the 17th the highest temperature was 102.2. On the 18th the morning temperature was normal, afternoon 100; patient much improved.

I removed the entire scrotum, which was a gangrenous mass. Sloughs on penis not ready to separate. The highest temperature on the 19th was 99.2. On

the 20th the temperature did not rise above normal, the sloughs were removed from penis, the tongue showed signs of clearing and the appetite was increasing.

Whether the rapid improvement noted in the symptoms after the injection of the serum was due to its action, or whether it was merely coincident with the abatement of the gangrenous development in the disease remains a question. If due to the former I regret that I did not resort to it early in the disease.

The parietal layer of the tunica vaginalis was entirely destroyed, both testicles and the external portion of the spermatic cords as well as the corpora cavernosa and spongiosa were completely exposed. The parts were irrigated three times daily with boric acid solution, raw surfaces dusted with iodoform and moist boric acid dressings applied. Granulations rapidly formed, and within six weeks patient was perfectly well. There was some retraction of the cords. The new scrotum, although not as roomy as the one destroyed, is just as serviceable. Dr. Whiting reports thirty-six cases of this variety of gangrene found in medical literature, not including the case recently described by himself.

"He advises that after swelling of the scrotal tissues has commenced, free incisions should be made in all cases except those of non-inflammatory oedema."

I do not consider it good practice to make early and free incisions in this virulent form of infection. Free incisions may sometimes relieve tension and allow fluids and gases to escape from the tissues that are already gangrenous.

To incise before the circulation of blood and lymph has ceased would expose the patient to the danger of general systemic infection or pyaemia, and as it is



questionable whether early incisions in progressive gangrene of the extremities retard or arrest the process, I think the surgeon should be very cautious before resorting to this procedure.

My second case to report occurred under my care in the hospital of the Upper Peninsula branch prison.

Mr. S., age 34, French Canadian. History of gonorrhœa, followed by strictures. I made repeated attempts at passing filiform bougies into the bladder, but failed. After each attempt patient would have a severe chill. I was finally induced to do an internal urethrotomy with a Gross urethrotome, an instrument so devised that when the point is engaged the hidden knife will cut forward instead of backward, and a false passage is easily made. My experience in this case taught me that if it is impossible to use the Otis urethrotome to resort either to the Wheelhouse\* or Cook's operations.

Patient was operated upon April 8th, 1905. After the operation had no difficulty in passing urine and had no chill or fever. He was up and apparently well.

April 10th a sound was passed, no history of chill following this procedure. April 14th sound was passed, followed by severe chill and fever. From this time on the patient had chills almost every day and his temperature ranged between 100 and 104  $\frac{3}{5}$  for an entire week. The perineum became quite tense and the scrotum, penis, and anterior layers of the abdominal wall were very much swollen. I made numerous and repeated punctures into the scrotum and penis allowing considerable bloody serum to escape. The

abdominal wall was incised and two large drainage tubes put in place and a large quantity of pus was liberated. The abdominal wall from the pubes to midway to the umbilicus and extending latterly to the anterior superior spines of the ilii became gangrenous and was removed in one immense slough. The destructive process in the median line extended through the abdominal wall and the wall of the bladder, causing a vesical fistula. The entire sheath of the penis sloughed and was removed; a urethral fistula was the result. Only about one-third of the scrotum was destroyed, exposing the right testicle. The patient has made an uneventful recovery. Both fistulous openings are closed, the testicle, penis and abdominal surfaces are all covered with integument.

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**Dysmenorrhea at Puberty, and Uterine Tumors.**—Frank DeWitt Reese presents the following two questions: (1) Is dysmenorrhea a symptom denoting the presence of uterine fibroids at puberty? (2) Are the causes of dysmenorrhea exciting causes of fibroid tumors of the uterus? As a result of his own experience and of the statements of other authors he considers that there is no doubt that fibroid tumors exist in utero previous to menstruation and are the exciting causes of dysmenorrhea in many cases. Of the last thirty-one cases of uterine fibroids that have come under the author's observation, all with but one exception have begun menstruation with severe pain. He also believes that the various causes of dysmenorrhea are possible causes of uterine fibroids, and cites numerous observations from the literature in support of this view. An illustrative case is described, showing the following four stages of progress in the evolution of the tumor: (1) Dysmenorrhea at puberty; (2) a deformity of the uterus (extreme antelexion) discovered at the first local examination, at the age of 30 years; (3) at 36 years of age there were backache, leucorrhea, and an enlarged uterus with a hard, uneven surface; (4) at 38, a tumor of the uterus had developed to such an extent that the patient detected it herself through the abdominal walls. The indications, accordingly, are to relieve the causes of dysmenorrhea at puberty in order to avoid the necessity of operating on fibroid tumors later.—*Medical Record*, December 23, 1905.

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\*Wheelhouse operation is an external urethrotomy with a guide, and Cook's operation is external urethrotomy without a guide.

## THE USES AND THE ABUSES OF THE OBSTETRIC FORCEPS.\*

J. J. MULHERON,  
Detroit.

The time has long since gone by in which it was necessary to argue the proposition that the obstetric forceps is a great boon to the child-bearing woman. Unfortunately, however, the converse of the proposition still admits of discussion and not only admits, but positively demands it. The obstetric forceps is like the two-edged sword which, unless employed very circumspectly, while doing good may also at the same time do much harm. It is meet that we occasionally review the value of even our instruments of precision, and this fact has determined the selection of the title of this paper.

The essentials of the obstetric forceps are a proper cephalic curve (three inches between blades) and the proper pelvic curve (tips of blades three and one-half inches higher than handles). An instrument possessing these is, regardless of the numerous modifications which have been made in other particulars, adapted to the requirements of the obstetrician. It is thus apparent that the chief value of many of the modifications of the instrument in the market is their service as an excuse for the attachment to them of their inventors' names. It was for a long time apparently thought necessary to distinction in obstetrics that the practitioner should have devised some modification of the obstetric forceps. Distinction in this respect is now, however, no more dependent on a forceps than is a gynecologist's reputation dependent on his devising

some new kink in a vaginal speculum. The limit has for some time been reached and it will be a genius indeed who suggests anything new in either of these instruments.

On entering the practice I introduced the Bedford forceps into my obstetric outfit, that being the instrument most in favor in those days. I afterwards added a short pair with only the cephalic curve for low application, and for upwards of twenty-five years these were made to do service. Frequent calls in consultation in cases in which the ordinary long forceps had been unsuccessfully applied, as well as the occasional necessity for the high application in my own practice, induced me to procure a Tarnier axis-traction forceps. These three pairs proved a cumbersome load to carry about, and for the past ten years I have carried only the latter instrument. I find it well adapted to low and median application, while it is incomparably superior to all others in high applications. In median and low cases it may be used without the traction rods.

The introduction of the axis-traction forceps marks a very decided advance in the art of obstetrics, insuring as it does the application of the extractive force in the line of the axis of the pelvic outlet. This *sine qua non* cannot be secured by the use of any other instrument, especially in cases higher up than the median position. The skill which grows from experience may do much to guard against the lamentable results of violent traction with the ordinary long forceps, but no degree of aptitude can absolutely elimin-

\*Read at Annual Meeting of Michigan State Medical Society, Petoskey, 1905, and approved for publication by Committee on Publication of the Council.



ate these results. The gynecologist's clientele is largely recruited from the results of the employment of the ordinary long forceps.

While the chief function of the obstetric forceps, and that for which it is primarily employed, is traction, the incidental uses are important, namely, for rotation and stimulation. It is also employed with questionable propriety as a dilator and as a compressor.

A word of protest against the application of severe tractile force. I speak from the experience which I have had in common, probably, with all who have essayed an instrumental delivery. Early in my practice I attended a woman in whom the dystocia was very marked. After the head had been engaged and the os fully dilated for five hours, I applied the forceps in the median position. Traction with all the force I had was continued for half an hour without securing appreciable advance. Having rested for half an hour I repeated the procedure. Thoroughly exhausted, I asked for consultation, and a gentleman, now deceased, at that time an obstetrician of very extensive experience and well-earned reputation, was called in. He was a large, powerful man, and the presentation being normal he approached the case with much confidence. The result, however, of his violent traction was no more satisfactory than it had been in my own hands. He then suggested, after a rest, that we unite our forces. He braced himself with his feet against the bed and the woman's buttocks. By reaching over his shoulders I secured a hold on the handles and we thus applied our conjoined strength, which it is reasonable to believe amounted to upwards of 400 pounds. It will be remembered that the instrument employed was

the ordinary long Bedford forceps. The child was delivered dead, and the injury to the woman's soft parts as well as to her bony structure was, to put it mildly, very serious indeed. The soft parts were immediately repaired, but the injury to the bones was such as to confine the woman to her bed for upwards of four months, at the end of which time she was still an invalid. The violent force had apparently developed a periostitis from which the woman suffered for upwards of two years. The lesson made a strong impression on my mind. I have never since been guilty of employing any such degree of force or of countenancing its employment in any case in which I have been called in consultation. In one case subsequently this force was employed contrary to my judgment and consent and the results of this were scarcely more satisfactory than those in the first instance. I appreciate the fact that it is impossible to lay down any hard and fast rule covering the exact amount of traction which may be employed with safety, but would suggest that a force of over 100 pounds should not be employed. The tentative use of the forceps may be thus fully tested and should it appear that a greater force than this would be necessary, a much safer procedure, both in the interests of the mother and the child, would be podalic version.

The correct application of the forceps presupposes a correct diagnosis of the presentation. Not many years ago I heard a teacher of obstetrics lecturing to his class on the use of the forceps, and was much impressed with the simplicity of the rule which he laid down. He actually insisted that all the rules for determining the presentation were interesting from a purely theoretical stand-

point, but that in actual practice the diagnosis of the presentation was absolutely unnecessary. "First set and lock the blades of your forceps and lay them on the bed beside the woman. You will thus make no mistake as to the proper blade to apply on each side. Simply introduce the first blade and then the second and manipulate the two until you get a complete lock, allowing the handles to come in contact. All that will be necessary after this will be for you to pull; nature will attend to the details of rotation, flexion, etc." I have given the learned gentleman's words as nearly as I can reproduce them and submit them without further comment.

The late Professor Sager, of the University of Michigan, was wont to simplify the instructions for the application of forceps with the dictum, "hunt for the posterior ear, and having found this, cover it up with the first blade. Introduce the second blade immediately opposite, then lock and pull." There could scarcely be laid down more reliable and simple working rule. It, of course, admits of criticism, but if strictly followed out little harm is likely to follow. My preceptor early impressed me with the necessity of first clearly diagnosing the presentation by using the familiar illustration of extracting a cork from an empty bottle. Unless the diameters of the cork are properly adjusted to those of the neck of the bottle an undue amount of traction will be necessary.

It is, not infrequently, very difficult, if not quite impossible, to locate the landmarks (the fontanelles) on the child's head. The most expert diagnostician occasionally finds himself at sea in such cases, and to apply the forceps to the occiput posterior head, under the supposi-

tion that the presentation is occiput anterior, is a procedure likely to be fraught with dire consequences. It is here that proficiency in diagnosis by external palpation is invaluable. The medical school which confers its diploma on a young man who intends to practice obstetrics, without having satisfied itself of his proficiency in making a diagnosis of the presentation of the child by external palpation, has laid upon itself a heavy load of responsibility. I speak from personal experience, having been sent out with authority to practice the art before diagnosis by external palpation was taught. It took me many years to acquire the necessary *tactus eruditus* and even with the aid of the explicit instructions which subsequent text-books laid down, progress was slow, with the limited amount of material afforded by private practice on which to practice the technique of the procedure. Fortunately I had learned the lesson of patience early, and consequently in my cases of forceps delivery the low application very largely prevailed.

The direction of the tractile force is important; regardless of the position of the head this force should be applied obliquely downward toward the anus until the head impinges on the perineum. This direction is most certainly secured by turning the woman on her side. After the head has been brought to the perineum she may be returned to the dorsal position. Unquestionably much injury has resulted from a disregard of this rule. Having reached the perineum the handles of the forceps should be gradually raised until they come quite in contact with the pubis. To guard against the employment of undue force the operator should work with flexed arms, the elbows being

closely held to the thorax. The bracing of the feet against the woman's buttocks or the side of the bed and pulling from the shoulders, thus adding the body force, is a procedure to be referred to only to be unreservedly condemned. Brute force has no place in the lying-in room.

The forceps is employed as a rotary in occiput presentations. When the small fontanelle is found in the lower quadrant the head having reached mid position and the os fully dilated, the hand should be introduced to assist rotation forward. The tendency in such cases is for rotation to describe the 45 degrees backwards, which throws it into the hollow of the sacrum. Delivery in this position is both difficult and inevitably productive of severe laceration of the perineum. Fortunately the use of the hand, aided by placing the woman in the knee-chest position, is usually effective in rotating the head through the 135 degrees necessary to bring the occiput under the pubis. Should it fail the forceps becomes an acceptable adjunct. Its intelligent employment will seldom fail to accomplish anterior rotation. To apply the blades in the usual manner, however, with the pelvic curve directed forward and to continue traction until delivery has been accomplished, would be dangerous. In such cases the pelvic curve will be found looking posteriorly when rotation has been effected. Scanzoni's instructions for double application in such cases should be closely followed. Having located the posterior ear in either the right or left lower quadrant, the appropriate blade must first be applied over it. This being held by an assistant the second blade must be applied and manipulated until a good lock is secured. Downward and backward traction is then to be made until

the perineum is reached, when rotary motion is given the forceps to correct the presentation. Rotation having been accomplished and the patient then placed again on her back, the forceps should be taken off and reapplied with the pelvic curve in its proper relations, before resorting to traction.

The other supplementary functions of the forceps need scarcely be dwelt upon. They are to be mentioned chiefly to be condemned. To use the forceps primarily as a compressor is reprehensible practice. The instrument necessarily causes some compression during the process of traction. This is unavoidable, but the deliberate use of the instrument with the object of compression is to be condemned. More forcible language than this is called for in condemnation of the use of the instrument as a dilator. Doubtless lacerations of the cervix are unavoidable in a considerable percentage of cases, but it is none the less true that the use of the forceps is directly responsible for the large majority of cervical lacerations which furnish material for the gynecologist. When the os is undilated or not easily dilatable it should be opened up by manual manipulation after the Harris method, when the use of the forceps may be deemed urgent. To introduce the forceps and drag the foetal head through a rigid os is certainly malpractice.

The application of the forceps is imperative in conditions threatening the life of the mother or the child. On the part of the mother we have eclampsia, heart failure, broken compensation, connected with valvular lesions, oedema of the lungs, hemorrhage from premature separation of the placenta, exhaustion, as indicated by objective rather than subjective symptoms. Lack of expulsive



force furnishes also a prime indication. It is a very good rule to apply the forceps if after the second stage has continued for three hours there has been no progress in the descent of the child's head. This rule applies more particularly to cases of median and low position of the head. Where the head has not descended to mid position it is well to secure its molding by the uterine contractions before applying the tractile force. On the part of the child the indications are prolapsus of the funis, premature separation of the placenta, disturbance in the rhythm of the heart beat and escape of meconium, in vertex cases. The escape of meconium in the latter cases indicates a paralysis of the sphincters and is thus a symptom of graver portent than when occurring in breech presentation. As a general rule the forceps should be applied in the interests of the child when the foetal heart beat falls below 100 or rises above 160 per minute.

The conditions covering the application and the extractive force of the forceps, are: First, correct presentation. We have seen how the instrument is of much value in rotating mal presentations and it should certainly be used for this purpose before being employed as a tractor. Secondly, the os must be dilated or easily dilatable. Thirdly, the membranes must have ruptured. The application of the blades over the unruptured membranes prevents the securing of a firm hold and the forceps will very readily slip. This condition, together with the danger of tearing loose the attachment of the placenta, makes it highly necessary that the waters should have been allowed to escape before the application of the forceps. Fourthly, the head must not be either too large or too small. Here the exercise

of the best judgment of the obstetrician is called into play. After a tentative traction has failed to effect any progress, the forceps should be removed and the condition of the head as to size and as to the capacity of the woman's pelvis are to be carefully considered. Should there appear any marked disproportion, other means than the forceps must be resorted to, to effect delivery. Fifthly, the forceps is contra-indicated in cases of contraction of the pelvis below the size universally conceded as necessary to permit the birth of a normal child.

A word in regard to the time for making traction. It is, I believe, the common practice to make traction immediately on securing a lock of the blades. The temptation to do so is strong and particularly so in the case of the young practitioner. It is not good practice. In a considerable percentage of cases no traction will be found necessary and it should not be applied until the necessity is apparent. The applied blades have an excitant action on the uterine contractions and this is frequently sufficient to effect expulsion without traction. It should be waited for. Traction should not be resorted to in the interval of the pains, but should be employed rather as a supplement to the uterine expulsive effort than to take its place.

It is generally advised by the authorities that the forceps be removed as soon as the head begins to distend the vulva, the reason given being that the added volume of the blades increases the liability of laceration. In my opinion, however, it is better to allow the forceps to remain until delivery is effected. By its aid the progress of the head can be controlled and the tendency to laceration thus lessened. Laceration is frequently directly



due to the violence of the final pain and may be obviated by the prevention of the sudden expulsion, an effective means to which end we have in the forceps.

During a recent conversation a young practitioner stated that he had just completed his first series of 100 cases of labor. He had followed the practice, too much neglected in private work, of recording carefully all details in connection with his cases, noting presentation, duration of the several stages of labor, mode of delivery, size of placenta, length of cord, weight of child, etc. On inquiry he informed me that his record showed but three cases of instrumental delivery. As compared with my experience this struck me as a remarkable showing. On examining my records for the past ten years I find that the percentage of instrumental deliveries is nineteen, and I have always regarded myself as quite conservative in the use of the forceps. The fact that my young friend's practice is in the country

has probably had something to do with his comparatively infrequent use of the forceps. Our farmers' wives are, as a rule, thanks to their more natural modes of life during gestation, better equipped for parturition than are their city sisters. It is my rule to apply the forceps if after the os has been fully dilated for three hours there has been no progress in the head's descent. Doubtless nature would accomplish delivery in a large proportion of such cases, but to wait longer than three hours is to jeopardize the child's life and the integrity of the pelvic floor. Under proper aseptic and antiseptic precautions, with a proper conception of the mechanism of labor and a correct diagnosis of the presentation, the use of the forceps is, moreover, unattended by any additional risk to woman or child. On the contrary, the timely, intelligent use of the forceps is both in the immediate interest of the child and in that of the subsequent condition of the mother.

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## THE TREATMENT OF CHRONIC CONSTIPATION.

JAMES A. MACMILLAN,  
Detroit.

### PHYSIOLOGICAL CONSIDERATIONS.

A very important part of the physiology of the colon is the question of stimuli. What are the factors that induce normal peristalsis? For convenience of study these may be divided into three classes:

1. Those emanating primarily from nerve centers.
2. Chemical irritation of the mucosa.
3. Mechanical disturbance in the bowel.

1. There are some facts that seem to favor the view that intestinal peristalsis is presided over by the nerve centers of the cerebro-spinal and sympathetic systems. Stimulation of the vagus or of the splanchnics induces contractions of some of the muscular fibers of the bowel. It is well known that by certain nervous conditions and impulses peristalsis is induced or retarded. Again, some of the cathartics when introduced hyperdermatically produce the same effect as when

administered by mouth. On the other hand the most convincing evidence supports the prevailing view that normally the stimuli of intestinal peristalsis is the intestinal contents.

2. A great number of clinical observations as well as many experiments have demonstrated beyond any question that chemical irritation in the bowel is a powerful agent to produce peristalsis. This seems to give a reasonable explanation of the action of cathartic remedies and the peculiar laxative effect of certain foods. A crystal of sodium chloride applied to the serous or mucous surface of the intestine is followed by the contraction of the gut near the point of application. Many other substances have a similar action. These experiments serve to illustrate the potency of chemical irritation in causing intestinal peristalsis. When the chloride of sodium is used for this experiment the contraction will be seen to involve from two to six inches of the gut. About a square inch of the serous surface around the crystal of salt blanches and in less than a minute the gut begins to assume a cord-like appearance. The contraction persists from one to ten minutes and in some cases, after a temporary relaxation returns. I have never been able to observe true peristalsis produced in those experiments in which sodium chloride and other chemical irritants were used. On the contrary the contraction resembled an enterospasm. Glycerine in the form of a suppository or enema produces active peristalsis, but the pain and straining seem to indicate that there is a large pathologic element associated with it. It does not serve the purpose here to discuss the way these agents bring about their results. Possibly the hygroscopic action of the glycerine and

salt may be the important factor, and this may act either by causing a sudden change in the blood-pressure in the gut, or by stimulating the nerve endings, a reflex impulse is set in motion culminating in motor stimulations. There may be drawn from these observations these conclusions:

1. Chemical irritations of the serous or mucous surface of the bowel produces effectual peristalsis.

2. In most, probably in all instances, the peristalsis so produced is attended with important abnormal phenomena.

It seems to be accepted by the majority of physiologists and clinicians that the natural stimulus inducing peristalsis in the colon is mechanical, and further that the essential feature of this stimulus is distention. In other words fecal material collects in the colon in sufficient quantity to cause stretching of the bowel wall and as a result peristalsis is produced. Under normal conditions the important feature is the quantity, not the quality, of the colonic contents. If the reverse were true, then a small amount of fecal material would stimulate peristalsis as much as a larger. While it is a common clinical experience to observe a small amount of very irritating material producing violent peristalsis, the process differs essentially from the normal. In health under normal conditions the chemical character of the fecal contents is of no importance, that is, as far as the production of peristalsis is concerned. An inert substance, without chemical affinity for any substance in the intestine is a perfect agent as a stimulus for peristalsis if its consistency is suitable and its quantity sufficient. Many clinical observations strongly favor this view, but in order to gain additional proof I experimented upon dogs

to observe the effects of different agents upon peristalsis. To determine the effect of distention of the colon the dog was anesthized with chloroform, and the abdominal viscera well exposed by long longitudinal and transverse incisions. The colon was emersed in normal saline solution at about 100° F. A collapsed thin rubber bag was then inserted through the anus and made to rest in the rectum or colon. This bag had a tube attached for the purpose of inflation. By these means any degree of distention of the rectum or colon can be readily obtained. The presence of the uninflated bag in the bowel produced no contraction. Moderate distention was followed after a length of time, varying in different dogs and in different parts of the bowel, by waves of contraction. Usually the contraction was seen to begin immediately above the bag, but occasionally it was first seen at some distance. As distention was increased the peristaltic contractions followed more rapidly and wave after wave propelled the bag along. These contractions continue even after the distention has ruptured the bowel. In most cases strong contractions of the abdominal muscles accompanied the peristalsis when it had reached a certain strength. These experiments seem to demonstrate that distention of the bowel induces normal effective peristalsis. It has been contended by some physiologists that stretching increases and contraction diminishes the volume of a muscle fiber, and further that this increase and decrease in volume promotes the absorption of nutrition, and the elimination of waste respectively. If this theory is correct it follows that the very agent that calls for muscle work is instrumental in

providing new energy to the muscle cell. The contraction of a muscle causes increased waste of its substance and the diminution of its volume promotes elimination. Metabolism is at its lowest when the muscle is at rest. When the muscle is stretched the increase in volume produces rapid absorption and at the same time stimulates contraction. It will be seen therefore that the nutrition and development of the intestinal musculature depends to a great extent upon the very stimulus that induces its activity. According to Herbert Spencer the evolution of the gastrointestinal muscle is made intelligible only when stretching is recognized as the stimulus of peristalsis.

One of the characteristic features of modern medical progress is the demand for principles fundamental in organic life. A conclusion regarding vital phenomena is more liable to be erroneous when the observation upon which it is based are limited to one species. It is interesting therefore to seek, in the field of biology, evidence bearing on the development of the intestinal muscle and its stimuli. I do not know that a detailed account of the phylogenesis of the gastrointestinal musculature has been worked out, but a study of the literature bearing on the subject confirms the conclusion that stretching is a most important agent in producing normal contractions of the alimentary canal. The following statement from Spencer's *Principles of Biology* seems to have met little or no opposition from subsequent writers: "If we remember that the muscular celloid is made to contract by mechanical disturbance, and that among mechanical disturbance that which will most readily affect it simultaneously through its mass is caused by stretching we shall be considerably



helped toward understanding how the contractile tissues are developed."

1. When a granule of vegetable carmin is ingested by one of the protozoa it is retained in the cell protoplasm for a time and then ejected. There has been no chemical change in the carmin, and in those organisms without a vacuole the carmin acts like a foreign body stimulating by its mere presence the contractile substance of the protoplasm.

2. In other protozoa digestion is effected largely in the contractile vacuole, and it is only after distention of this vesicle has reached a certain degree that contractions begin. These contractions are made evident by the changes of the vesicle, by its propulsion to the outer limits of the cell, and by its subsequent protrusion and rupture.

3. In certain higher forms of animalcule there is a permanent stomach which communicates externally by a permanent canal. The water containing possible nutrient particles is swept into the stomach by cilia until a certain distention has been reached, and then a sudden contraction occurs which empties the stomach through the same canals from which it was filled. Here again, in the absence of any contrary evidence, distention must be recognized as the stimulus causing the contraction.

4. In organisms more highly developed the digestive processes are more elaborate, there are longer intervals between feedings, longer retention of food, and consequently greater distention. Under these circumstances, and synchronously two new structures appear, viz., muscular tissue in the gastrointestinal canal, and a separate anal orifice for the elimination of waste. Vermes are the lowest order in which these anatomical fea-

tures are found. Under the operation of the same factors the more fully developed gastrointestinal musculature of higher organisms was formed.

Physiological researches of the last few years have brought into prominence the chemistry of the gastrointestinal canal. It is well known that the secretive activity of the glands of the alimentary system as well as the processes of digestion depends upon an alternating preponderance of acids and alkalies in the stomach and bowels. Then, it is also known that the growth of bacteria in the intestine is controlled by the chemical nature of its contents. More recently it has been discovered that the action of the pyloric sphincter is regulated by the chemical reaction of the stomach and duodenal contents. While these considerations show the importance of chemistry of the gastrointestinal contents they have no direct bearing upon peristalsis. However, these discoveries have caused the purely mechanical stimuli in the intestine to be, to a great extent, ignored. During the last decade statistics upon the treatment of chronic constipation and other conditions depending upon faulty peristalsis strongly favor mechanical agencies and methods.

This brief account of a portion of the physiology of the intestine is given to suggest a reason for and an explanation of the success of these agencies and methods.

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**Subjective Ozena.**—John Knott (Dublin, Ire.) gives a resumé of the history of this disorder and cites a number of cases which have occurred in his own practice. In none of the cases did there appear to be the slightest trace of any organic lesion, central or peripheral, to account for the peculiar and distressing condition.—*American Medicine*, December 16, 1905.



## A FEW RESULTS OF ROENTGEN RAY THERAPY WITH REPORT OF CASES.\*

CONRAD GEORGE, JR.,  
Ann Arbor.

Our knowledge of the therapeutic uses of the Roentgen rays has been considerably increased during the last few years. Numerous reports of the undoubted value of this form of treatment in certain selected cases continue to appear in medical literature. The remedy, however, has not been found capable of producing all the results that were expected of it at first when the wonderful power of these rays was much overrated and the imagination was easily led to predict results from its use which our experience has since determined to have been impossible. On the other hand, the treatment cannot be discarded because some remarkable results have followed its intelligent application. It gives very positive results in those cases best adapted to this kind of treatment, but its limitations should be well understood.

Numerous diseases for which formerly there was no cure, not even palliative, can now be treated with benefit by the Roentgen rays. Among these might be mentioned lupus vulgaris, epithelioma, rodent ulcer, acne, chronic localized patches of eczema, psoriasis and many other skin diseases. More uniform results have been obtained in the treatment of these diseases with X-rays than with Finsen's light or high frequency currents.

Good results have followed the proper use of X-rays in tubercular glands, before and after operations for carcinoma

and certain cases of inoperable carcinoma. They have more recently been proved to be of value in the treatment of chronic ulcers, sinuses, keloids and leukemia.

It is believed that the treatment with X-rays before operations for malignant growths lessens the vitality of the tumor cells and destroys some of them, thus increasing the prospect of an operative cure. In inoperable malignant growths the Roentgen rays are of doubtful utility except in certain cases where they have proved to be of benefit by relieving pain or actually causing the disappearance of the growth. This treatment seems to have a peculiar selective action in these cases, while in others closely resembling them clinically, it has the opposite effect of stimulating the growth to renewed activity on account of the irritation produced. It may have a destructive action upon the superficial cells of such a tumor, but the deeper cells seem to take on a more rapid growth, shortening the life of the patient very materially and adding to the pain to be endured. I have seen this demonstrated very forcibly in a case of inoperable carcinoma of the breast where the application of the Roentgen rays merely added fuel to the fire and increased the sufferings of the patient considerably, death taking place from a rapid extension of the disease internally.

The mode of action of the X-rays is still a matter of theory and various explanations have been offered. They are believed to have both local and systemic effects. The growth of some cells is inhibited and others stimulated by them,

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\*Read at Annual Meeting, Michigan State Medical Society, Petoskey, 1905, and approved for publication by Committee on Publication of the Council.

and in this way the metabolism of the body cells is altered. The inhibitory action of the Roentgen rays is shown in the treatment of epithelioma, the cells of which undergo fatty degeneration and are absorbed. The same changes can be observed in the superficial portions of some carcinomata. Circulatory changes occur in the skin when frequently exposed to the action of the X-rays. The capillaries become dilated and a congestion of the skin results which is shown clinically by dermatitis.

An example of the irritative effects of the X-rays may be seen in the rough skin and warty growths which have been observed upon the hands of some X-ray operators.

The systemic effects following the use of this agent are believed by Baerman and Linser to be due to the formation of a toxin within the tissues. For this reason the dosage must not be carried to the point of producing a constitutional disturbance, as chills and fever which result from the absorption of these toxins formed by a kind of retrograde metabolism. It is not even necessary to excite a dermatitis in the skin to secure the best results of this treatment as a cure is effected by absorption and not by burning the tissues.

The X-rays may be excited by an induction coil or a static machine. The use of the induction coil appears to give the best average results. There has been considerable difference of opinion among operators as to the proper distance of the tube from the patient or the part exposed and the length of the exposure. This arises from the difficulty experienced in measuring the dosage of X-rays. Attempts have been made lately to determine this dosage at least approxi-

mately so that some standard therapeutic dose may be readily applied. A milliamperemeter can be placed in circuit with the tube to determine the strength of current passing through it. H. C. Snook, of Philadelphia, has invented an apparatus for measuring the volume of current from its induction. The penetrability of the Roentgen rays can also be determined. From these facts one can determine the dosage that was employed to obtain a cure in a special case or series of cases. It would be governed by the same principles as any other therapeutic measure and might have to be altered in special cases. The Roentgen ray light varies inversely as the square of the distance, being more uniform in a given space, the greater the distance from the part exposed. C. L. Leonard, of Philadelphia, uses the following for a standard dose, a ten minutes treatment with the platinum eight inches from the skin, the tube having an equivalent air resistance of two inches and energized by a current of two milliamperes. R. H. Boggs exposes at longer distances because he believes that the light effects will be more uniform. He keeps the tube at sixteen inches for exposures of twenty to forty minutes. Portions of the body which are not diseased should be protected from the action of the X-rays by means of lead foil or other material not penetrated by the rays.

The apparatus which I have employed in private practice for the production of the Roentgen rays consists of an induction coil supplied with a current from fifty volt sixty cycle alternating current mains. The current is seven and fourteen hundredths amperes through the primary of the induction coil measured by an electro-dynamometer. The current

passing through the X-ray tube is approximately a milliampere. The penetration of the X-rays as measured on the Benoist scale is eight millimeters of aluminum. The tube backs up a three-inch spark.

The following cases are of interest because they illustrate some of the results that may be obtained by the use of the Roentgen rays in the treatment of disease.

CASE 1.—Miss G., age 35, single. Referred to me by Dr. C. G. Darling for treatment with X-rays. Diagnosis, lupus vulgaris. Her mother's brother died of consumption at the age of 27. Patient had typhoid fever at the age of 15. She was sick from August until winter. She had measles two months later. After this she could not walk and a swelling appeared on the great toe of the right foot. It was not red or painful and was incised by her physician. A little blood escaped, but no pus. This wound never healed and the disease traveled up the limb, involving the bone. The knee-joint became swollen and stiff. Thirteen years ago an amputation was performed in the middle of the right thigh for tuberculosis of the knee-joint. She has had no recurrence of the disease in that limb.

About twenty years ago a nodule appeared under the chin. This was removed but the wound was very slow in healing. A similar nodule appeared at the bridge of the nose, then one on the cheek in front of the left ear and a similar lesion upon the other cheek. These lesions would ulcerate and become covered with scales. They were treated for years with various lotions and ointments without any benefit.

An examination of the face on May 9, 1903, revealed in a marked degree the de-

structive effects brought about in the tissues by lupus vulgaris. There was an ulcer upon the bridge of the nose which required a constant wet antiseptic dressing to keep it comfortable. The superior and inferior lateral cartilages of the nose were destroyed so that its tip appeared bulbous. The nasal septum was thickened. The lobule of the left ear was destroyed and the remainder of its surface was ulcerated. On the left cheek were two large reddened areas or patches of infiltrated skin covered with scales and their surfaces were constantly moistened by the secretion of a thin fluid. There was a similar lesion on the right cheek. Upon the tragus of the right ear was a small cold abscess and there was a small tubercular ulcer over the right border of the lower jaw. The upper lip was swollen and covered with scales.

Treatment was begun with the Roentgen rays May 9, 1903, by exposing the ulcerated border of the left ear for five minutes at a distance of eight inches. As this was not followed by any ill effects all the lesions were exposed in the same way every other day. After seventy-three such treatments the cheeks ceased to discharge any moisture and the ear healed, but became covered with scales. One hundred and ten more treatments were given with an exposure of ten minutes daily to each lesion when the nose healed for the first time August 9, 1904. Potassium iodide was given internally during this same period. Altogether two hundred and seventeen treatments were given. This patient has remained well for nearly a year. The case illustrates how a chronic disease like lupus vulgaris may be gradually brought under the influence of the X-rays and a cure effected. This method of treatment appears to be



more reliable than any other but requires a great deal of patience to get the best results. If a recurrence takes place the treatment may be again repeated as often as it seems necessary.

CASE 2.—Mrs. H., age 80, married, widow, housework, United States. Diagnosis, epithelioma of hand. Patient says that the ulcer on her hand has been gradually enlarging for about two years. At first there was a small wart on the back of the hand which gradually increased in size and finally broke down, forming an ulcer. This has continued to enlarge until at present. September 29, 1903, it occupies the whole of the back of the hand. Various ointments and solutions have been used to cause it to heal, but these were unsuccessful. The diagnosis, however, is uncertain because the patient refused to allow any portion of the skin to be removed for microscopical examination. After a few exposures to the Roentgen rays a marked diminution in the size of the ulcer could be observed. After forty-five treatments the wound healed with the formation of a smooth scar. It has remained well for nearly two years.

CASE 3.—Mrs. K. A., age 64. Diagnosis, carcinoma of the breast according to the pathologic report made by Dr. Warthin. An operation was performed May 24, 1904, by Dr. Darling. Both pectoral muscles and the enlarged glands in the axilla were removed. One gland was dissected off from the axillary vein.

The wound healed nicely except one small portion in the middle, where a large scab formed and separated, leaving a granulating surface one inch by an inch and a half in area. As this did not heal promptly I began treatment with the X-rays July 30, 1904. The ulcer was dressed with sterile resin cerate ointment,

alternated with sterile zinc oxide ointment. The exposures were made for five minutes at a distance of eight inches. On September 9, 1904, the exposures were lengthened to ten minutes and later to fifteen minutes as the wound was not healing. After forty-three treatments the wound healed. The patient died December 18, 1904, of an acute fever which had continued for nine days, death taking place about two months after the wound was healed. The interval between the healing of the wound and death was too short to consider the carcinoma as cured, but the treatment was of benefit to the patient in causing the wound to heal, thus relieving the mind of the dread of death from cancer.

#### CONCLUSIONS.

It is important that some method of measuring the volume and penetration of X-rays should be adopted in order that a standard therapeutic dose may be applied. The results of treatment will then be more uniform.

The Roentgen rays are of great value in the treatment of lupus vulgaris, epithelioma and other diseases of the skin. Favorable results may sometimes be obtained in inoperable malignant growths in carefully selected cases. This treatment may also be employed as supplementary to operations for carcinoma.

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**Make the Record Now.**—Physicians are charged with a new duty under an act of the last legislature in regard to filing certificates of births with township, village and city clerks. The act takes effect on January 1, 1906. Under the old law births were enumerated by assessors and supervisors once a year, which proved to be a very imperfect and inaccurate way. When filed promptly within ten days after birth, the returns should be complete and reliable. Blanks and instructions have been mailed to all physicians in the state by the Secretary of State, Lansing, who has charge of this matter.



## CLINICAL HYDROTHERAPY.\*

TOBIAS SIGEL,  
Detroit.

## INTRODUCTORY.

I take this opportunity to exhibit some original hydro-therapeutic procedures according to the technique instructed at Vienna and as they are possible in the most humble home. The utensils to accomplish these procedures are found in any household. The intricate nomenclature coined both by empirics and scientists for simple hydriatic measures ought to make these ocular demonstrations welcome. Herr Franz Kornecker, whom I have now the pleasure to introduce to you, will follow the text-book according to which he has received his hydriatic instructions at the Wiener Poli-Klinik, Vienna, Austria. Herr Kornecker is a graduate of the original Winternitz Institution for the Training of Hydriatic Nurses under the supervision of Hofrath, Prof. Wilhelm Winternitz and under the management of Prof. B. Buxbaum, the author of the guide or text-book in use. I have seized the opportunity to demonstrate to you to-night through one of his own graduates the original Winternitz measures in their simplest form and with such apparatus as to make them possible anywhere wherever a medical man steps in. Wherever the accent of the procedure lies and minute attention is to be paid to details will be pointed out to you. May this demonstration give new impetus to the employment of water, the most versatile of all remedial agents, and due recognition to its therapeutic value. Fads

of so-called "Turkish baths" have done much to injure the employment of water, owing to the fact that so many people having taken "cold" through them, and this simply because they were overdone. Through competition among such wash-houses we have a conglomeration of one-half to a dozen treatments, lasting always from one to three hours, and until secondary reaction (inhibitory paralysis) sets in and the patient leaves the house with coryza, headache, and general malaise. This overdosing is principally due to the "Tip-System"—a European curse now in vogue here, and the cupidity of the "Rubbers," through whom the true aim of the bath is often defeated.

Although the number of procedures is seemingly few, the experienced hydriatist can get along with much less. Different authors describe different remedies often, making a distinction without a difference, and ranging with their number of procedures from 19 to over 200.

## PRACTICAL DEMONSTRATIONS.

**ABLUTIONS:** Cooling of head, hand, mitten, towels, clothes, sponge, luffa, with towel bath. (50-60° F.)

**SYNONYMS:** Sponge bath, wet hand rub, wet mitten friction, Abwaschung, Teilwaschung. Partialwaschung, Schwamm-bad.

**DOSAGE:** Difference of body heat and temperature and amount of water employed, pressure used during friction, duration of procedure, drying parts or leaving to evaporate, frequency of repetition.

**ACTION:** Shock, causing improvement

\*A paper read before the Wayne County Medical Society Oct. 2d, 1905, with demonstrations by Herr Franz Kornecker (with two assistants).

in circulation throughout the body, by reflex action from the nervous centre. Tonic to the heart by improving peripheral vaso-motor activity, enhancing resiliency, lessening vis a fronte, and increasing vis a tergo (Baruch), p. 98. Reduction of temperature. Anti-febrile by increasing area of evaporation by causing dilatation of superficial bloodvessels. It relieves the spastic condition of the peripheral capillaries that exists in febrile conditions. It increases the capacity of the muscles and reactive capacity of the skin.

**INDICATIONS:** Anaemic skin, infectious fevers, myxedema, disease due to exposure and the digestive apparatus, employed continuously until feeling of cold sets in. Catarrhal conditions of the nose, throat and bronchi, cardiac and renal dropsy. As a diagnostic means to elicit the patient's reactive capacity, furnishing a clue to plan for subsequent hydriatric treatment. (A diagnostic feeler). Corry—short and quick! Children and weak patients. As a preparatory means to more heroic hydriatric procedures. Where increased blood pressure is desirable. To relieve internal congestions. To exercise the skin and fortify it against the inclemencies of the weather, (taking cold), rheumatic pains of muscles and joints, being analgesic and refrigerant in action: in chronic disease, anemia, chlorosis, phthisis, in typhoid fevers as well as in any other infectious fever, especially among children, where the brand-baths are impossible.

**CONTRAINDICATIONS:** Furunculosis, dermatitis, cyanosis, coldness of body-surface, in moribund state.

**SPECIAL PRECAUTIONS:** Guard against retrocession into the brain by cooling the head first. Patient may partake of stimu-

lants. The water may contain salt, vinegar, etc., etc. Tardy reaction denotes impending collapse. Good reaction should be secured in one part before proceeding to another Teilabreibung.

**AFFUSIONS:** 55-65° F. (13-18° C.)

**SYNONYMS:** Pail poure, Begiessungen, Uebergiessungen, Guesse (Kneipp) "Knieguss, Rueckenguss, Unterguss, Oberguss, Brause."

**DOSAGE:** Temperature, impact and quantity of water used. Duration, condition of skin.

**ACTION:** Same as ablution, only more forcible, causing *gasping* and thereby relieving the pressure on the right side of the heart. Increases metabolism and bodyweight, pulmonary and cutaneous circulation. Reduces the number and deepens the cardiac contractions, thereby increasing blood-pressure, oxygenating the blood and overcoming threatened hypostasis within the lungs, especially in a case of pneumonia.

**INDICATIONS:** Threatened hypostasis in pneumonia, asphyxia, asthma, unconsciousness, delirium, stupor, adynamia, when superficial blood-vessels react feebly (Cyanosis), hypostatic congestions, when air-vessels are clogged, collapse, threatened heart failure, in scarlatina meningitis, cerebral hyperæmia, insolation, pneumonia cerebri.

**SPECIAL PRECAUTIONS:** "Do not allow friends or relatives to witness procedure, but only changes wrought." Baruch, p. 65. Always use friction.

**SHEET RUBS:** Head cooling, Feuchte Handtuch Abreibung, Lackenband, Abklatschung, Luftband.

**SYNONYMS:** Wet sheet rubs, wet towel rubs, sheet-baths, drip-sheet, dripping-sheet, damp-sheet rub, wet sheet rubbing, rubbing wet sheet. Kalt Abreibung, Abklatschung, Abreibung, Mantelabreibung, Ganz-Abreibung, Abstreifung.

**DOSAGE:** Action modified by patient laying in bed or standing in water of various temperatures. Amount of water left in the sheet. Difference of temperature between body and water employed. Coarseness of sheet or towels used. Antipyretic:

- ℞ (1) very wet sheet 60-50° F.  
 (2) double sheets;  
 (3) repeated sheet wetting;  
 (4) prolonged applications;  
 (5) dripping sheet 50° F.

Drip sheet slows pulse (20 beats) and energizes the heart and increases respiration (5 breaths.)

**ACTION:** Same as ablutions and affusions, increased by large area acted upon and amount of friction applied and frequency of repetition. Baruch in his book on Hydrotherapy (p. 107) claims that "by this method two-thirds of the body-blood may find lodgement in the skin." *Deviative* (short and cold), revulsive, *alterative and tonic* (less dry) drip-sheet—more rigorous than wet-sheet, Respiration deepened and increased. Nitrogenous consumption increased from one to thirty-one per cent. Antipyretic, antiphlogistic, refrigerent, rectal temperature falls while axillary elevates.

**INDICATIONS:** Lowering of temperature, anæmia phthisis, defective hæmatosis, insomnia, cerebral congestion, nephritis (contracted kidney), fever (as a substitute for a full or brand bath). As a substitute for the douche in domestic practice. Melancholia, hypochondriasis, neuralgias, pulmonary and bronchial disease, convalescent state, low blood-pressure, feeble circulation, deep seated hyperæmia, acute and chronic catarrhal conditions, neuritis, myalgia. May be substituted where the brand bath is indicated but not tolerated. "For use at

home!" "Preëminently useful at any place and any condition." Disorders of liver, spleen and viscera.

**CONTRAINDICATIONS:** Dermatitis and painful eruptions upon the skin, hyperæsthesia and feeble reactive capacity. When secondary reaction sets in; goose skin, shivering and blueness of the skin.

**SPECIAL PRECAUTIONS:** Patient must be rubbed or spatted until skin is warm. Patient should rest after procedure.

**PACKS:** Feuchte Einpackung, Trokene Einpackung, Mod. Einpackung. —Hot blanket pack.

**SYNONYMS:** Packs, full packs, tonic, revulsive, hot and cold. Ganzpackungen, modifizierte, Erregende eder und Schwitzpackungen.

**DOSAGE:** Temperature of sheet, nature and thickness of material used as a covering, duration of pack, amount of body surface covered, amount of water left in the sheet.

**ACTION:** Contraction followed by dilation of the cutaneous blood-vessel. Elimination of toxine. Excitation of the cardiac and respiratory centres. Tonic effect upon muscles. Reduction of temperature. Tonic action on kidneys, by encouraging diaphoresis. Renders skin succulent, soft and pliable. Relieves gastro-intestinal hyperæmia and cerebral congestions.

**INDICATIONS:** Acute and chronic rheumatism, auto-intoxication, insomnia, anæmia, chlorosis, nephritis (no diuretics needed). In private practice as a substitute for the hot air bath, rheumatic gout, albuminuria, eclampsia, diabetes, indigestion, chronic mental disorders, paresis, acute mania, tachycardia, palpitation morbus Basedewii, syphilis, typhoid fever, sciatica.



**CONTRAINDICATIONS:** Extreme weakness.

**SPECIAL PRECAUTIONS:** Complete exclusion of air from beneath the blanket covering. The reactive capacity of the patient must first be known. These procedures may be followed by an alcohol rub, douche.

**COOLING APPLICATIONS.**

**DOSAGE:** Cooling coil, wet compress, (turban) icebag, precordial compress, alternate compresses, heating compresses (Cataplasms) or fomentations.

**ACTION:** Relieving congestion, improving circulation, innervation, raising blood-pressure, cardiac stimulant.

**INDICATIONS:** Local congestions, valvular lesions, degenerative conditions of the heart.

**SPECIAL PRECAUTIONS:** Thin evaporating cloth compresses and cooling coils are preferable to ice-bags.

**SHALLOW BATH.**

**SYNONYM:** Half bath. Halbbad, Halbbad mit Uebergießungen.

**DOSAGE:** Temperature of water in tub and temperature of water used for pour, height of pail-pour, number of pourings, amount of friction made. The gradual lowering of temperature of the water in the tub.

**ACTION:** Stimulating the peripheral blood-vessels, refreshing by stimulating the heart, the motion of the stomach and intestinal secretion. Relieves parietic conditions of superficial blood-vessels in toxæmia. Carminative and sedative.

**INDICATIONS:** Fever, functional nervous diseases, tabes dorsalis, myelitis, digestive disturbances, neurasthenia, anæmia.

**CONTRAINDICATIONS:** Subnormal temperature, intestinal hemorrhage, hæmoptysis.

**SPECIAL PRECAUTIONS:** Bath-tub should be spacious. The slower the heat is abstracted, the more enduring will be the reduction of body temperature.

**SITZ BATH:** Hip bath, 55-65° F. (18-15° C.)

**SYNONYMS:** Sitbad, Hueftbad.

**DOSAGE:** Temperature of water and duration.

**ACTION:** Arresting or increasing peristalsis, increasing and diminishing circulation within the pelvic organs.

**INDICATIONS:** Diarrhœa, constipation, diseases of the genital organs, impotency, spermatorrhœa, amenorrhœa, passive amenorrhagia, subacute and chronic ovaritis, profuse menstruation after failure of curretment. Vesical tenesmus, agrypnia (before bedtime), acute and chronic intestinal catarrh, lessening intestinal secretion, acute and chronic gastric catarrh.

**CONTRAINDICATIONS:** Sexual irritability, active menorrhagia, uterine colic, cystitis.

**SPECIAL PRECAUTIONS:** The feet of the patient should be in the footbath 104 to 105° F. Exercise after cold, except when taken for insomnia. Rest in bed after warm sitz-bath. Patient's head to be kept cool. Warm Sitz baths dislodge impacted feces, are culminative. 100-110° F. (34-42° C.), 6-60 minutes.

**FOOT-BATHS:** 55 F. or 13 C. (cold). (10° C.) short.

**SYNONYMS:** Fussbaeder, Fliessende Fussbaeder.

**DOSAGE:** Height and temperature of water, friction used. Best by the patient himself. Head cooling, duration (usually short).

**ACTION:** Short contraction of peripheral vessels, followed by tonic dila-



tions. Derivative to head, cerebral hyperæmia.

INDICATIONS: Cerebral congestions, migraine (caused by congestion to brain), constipation (Peristalsis being reflexly encouraged), Plethora abdominalis, cold feet, insomnia, some forms of constipation (reflex).

CONTRAINDICATIONS: Catarrh of air passages, bladder, gravidity, hysterical patients.

FOOT-BATH HOT: 115 F. or 46 C.,  $\frac{1}{2}$  hour.

DOSAGE: Temperature and duration.

ACTION: Primary peripheral hyperæmia.

INDICATION: Asthma, retarded menstruation.

SPECIAL PRECAUTIONS: Patient should be active with his feet while taking the bath.

RUNNING FOOT-BATH: Walking in wet, cold grass, snow, and brooks are fads that would vanish at the tribunal of science—the Wayne County Medical Society. Some medicated baths and fango-packs, that are described in Buxbaum's text book, cannot be exhibited here, but to complete hydrotherapy at the bed-side, the following procedures must be added.

HOT AIR BATH: With or without precordial compress.

SYNONYMS: "Phénix alair chaud," Irish or Irish-Roman, or Turkish bath in bed. Heissluftbad im Bett. Quincke's Form. Matthes S. 163.

DOSAGE: Temperature 110° to 160° F. Etheral or alcohol rubs before bath increase its efficacy. Duration 15 to 30 minutes, 2 to 3 a week.

ACTION: Diaphoretic, increased oxygenation, and elimination of CO<sub>2</sub>, burning up of fatty tissue, increasing metabolism, diminishing leucocytosis, increasing

pulse and respiration, diminishing arterial tension, restricting heat diffusion, enfeebling heart and may cause faintness, owing to sudden dispersion of blood into the cutaneous tissues.

INDICATIONS: Obesity, gout, rheumatism, arthritis, myalgia, neuralgia, lumbago, ascites, mercurialism, ischias.

CONTRAINDICATIONS: Atheroma, cardiac lesions.

SPECIAL PRECAUTION: Breathing fresh dry air during procedure to increase the amount of oxygenation is paramount. Pulse and temperature should be watched. The inhalations of the exhalations of other patients in the rarified air of the usual hot room is dangerous.

ELECTRIC LIGHT BATH: Electric lights are attached to hoops which cover the patient (a procedure introduced first by Dr. J. H. Kellogg, of Battle Creek, in 1893).

SYNONYMS: Radiant light baths. Strahlende Lichtbaeder.

DOSAGE: Same as hot air bath—acting especially on the sudoriferous glands and induce sweating at temperature of 75° F. within 3-5 minutes. Less heat needed to make patient sweat.

ACTION: Same as hot air bath. Not sufficiently demonstrated to deduct any special action except that of furnishing heat (Mermagen, p. 104).

INDICATION: Same as hot air.

CONTRAINDICATIONS: Same as hot air.

SPECIAL PRECAUTIONS: Same as hot air.

STEAM BATH.

SYNONYMS: Russian bath. Russisches bad. Dampfbad.

DOSAGE: Temperature and duration 110° to 140° F., 10 minutes up to 1 hour, 2 to 3 times a week.

ACTION: Accelerates heart's action, increases body-temperature by preventing radiation, dilation of peripheral blood-

vessels, increases perspiration by rendering the skin succulent, the contents of the sebaceous glands soft and eliminative and opens the orifices of the sweat glands. Increasing elimination in general toxins and reduces, when prolonged, body weight by destruction of albumen. Increases metabolism.

**INDICATIONS:** Diseases due to insufficient oxydation, providing the patient is given cool and fresh dry air from outside while in the steam. Obesity, rheumatism, gout, ascites, Bright's diseases (nephritis), breaking up of a cold. Prophylactic against acne, furunculosis, psoriasis diseases of the lymphatic system, tertiary syphilis, preparatory to mercurial annunciations, arthritis deformans, general exudations, elimination of infectious germs.

**SPECIAL PRECAUTIONS:** The breathing of dry fresh air is paramount. Patient should not breathe in any steam, on account of its interfering with the interchange of gases within the lungs, and apt to give rise to pulmonic congestions, interfering with circulation, causing headache and vertigo. Precordial compress or ice bag over the heart may become necessary—atheroma valvular lesion.

**THE BRAND FRICTION FULL BATH.**

**SYNONYMS:** Cold friction full bath.

**DOSAGE:** Temperature of water, amount of friction, duration, frequency of repetition, kinds of stimulants given, 70° to 65° F., 10 to 15 min.

**ACTION:** Arousing the general nervous system, by cold shock reactive, dilation of the superficial blood-vessels, cooling of the blood, elimination of toxins, relieving spastic conditions of peripheral blood-vessels, diminishing frequency of heart beats and thereby giving the heart rest by prolonging intervals between contrac-

tions, relieving kidneys and lungs by increasing oxidation, breaking up of effete matter and rendering it eliminative, increasing the amount of blood corpuscles, especially the leucocytes, rendering the blood alkaline and a solvent for acid deposits, increasing vital resistance and muscular excitability, activity of liver, kidneys and skin, increases the nutrition of the heart muscle itself and the circulation in general. Ameliorates sufferings of patient, shortening the duration of typhoid fever, lessening complications.

**INDICATIONS:** Typhoid fever, scarlatina, pneumonia.

**CONTRAINDICATIONS:** Subnormal temperature with cyanosis, intestinal perforation, peritonitis, pleurisy, extensive bed sores, reactive inability (moribund state), threatened hemorrhage, syncope.

**SPECIAL PRECAUTIONS:** Friction is paramount, causing reactive dilation of skin, preventing shivering, assisting the heart, preventing internal congestion, encourage reaction by placing patient in warm bed, after bath.

**EFFERVESCENT BATHS:** Carbondioxide, Nauheim, Drs. Aug. and Theo. Schott.

**DOSAGE:** Temperature of water, amount of ingredients, duration, size of gas bubbles and repetition, 80° to 95° F.

**ACTION:** Elevation of blood-pressure, revulsive, derivative, relieves heart, kidneys, stimulates nonstriated muscular fibres (involuntary variety), giving a direct stimulus to the heart, contracting a dilated heart three-quarters of an inch during one treatment (Baruch), reducing temperature and fever, lower temperatures being tolerated on account of the carbon dioxide acting on the "hot spots," increasing blood-pressure and thereby urinary secretion, producing peripheral

hyperaemia by friction, ebullition of the gas bubbles, establishes true compensatory hypertrophy by rendering the systole more vigorous.

**INDICATIONS:** Valvular lesions, dilation and disturbed compensation of heart. Rheumatism, spinal irritation, neuritis, muscular weakness, sexual neurasthenia, circulatory disturbances, nephritis, heart failure in pneumonia.

**CONTRA:** Extreme compensatory disturbance, tendency to emholism, infraction of the lungs, apoplexy, angina pectoris, aortic aneurism.

**SPECIAL PRECAUTIONS:** Patient should be protected from inhaling the gas, as it interferes with respiration, doors and windows should be open during administration of bath. The baths must be graduated according to the subjective feeling of the patient after his first bath, which should be a very mild one. If patient feels refreshed after his first bath, the carbonic acid may be increased and the temperature in the succeeding baths gradually lowered. This bath should only be administered by experienced nurses.

**EFFERVESCENT BATH:** Oxygen. (The speaker's attention to these kinds of baths as a better substitute for CO<sub>2</sub> baths was first called by an article of Dr. Saarhsohn, of Meran, Austria, in the *Blätter für Klinische Hydrotherapie*, February, 1905.)

**SYNONYMS:** Brausende oder moussierende Sauerstoffbaeder.

**DOSAGE:** Temperature of water, amount of ingredients used.

Following statements are hypothetical on account of lack of sufficient clinical experience:

**ACTION:** Oxydation, disinfection, revivifying, antiseptic, stimulant to the respiratory mucous membrane, heart and

respiration. The peripheral stimulation by the air brush formed by the ebullition of fine vesicles (be 3 to 5 times smaller than those of carbon dioxide) causing peripheral hyperaemia and giving a velvety feeling to the skin and voluptuous sensations. The bath may be changed to a carbonic acid bath by adding to it bicarbonate of soda. This bath is superior to the carbon dioxide bath on account of the gas it liberates being wholesome, instead of harmful, the inhalation of which being indicated in almost all diseases known. No inhalation of obnoxious gases, no impervious sheeting needed to guard against inhalation.

**INDICATIONS:** In all disease due to deficient oxydation as obesity, gout, diabetes, rheumatism.

**ANTISEPTIC:** Conjunctivitis purulenta, blepharitis marginal, scabies, ozena, bronchitis, hay fever, pneumonia, typhoid fever, whooping cough, scarlatina, influenza, tuberculosis.

**ALTERATIVE:** Syphilis, scrofula, anaemia, chlorosis, asthma, resuscitation.

**COUNTERINDICATIONS.** None.

**MASSAGE:** Mechanical; vibratory by machines; canon-ball rolling on the abdomen and manual by skilled masseurs.

**INDICATIONS:** Painful acute and chronic swellings, hyperplasia, exudations, deposits, goitre, paralysis, constipation, when due to lack of peristalsis. May precede or follow all procedures.

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**Has the Baby Been Registered?**—Parents of children born in Michigan after January 1, 1906, will be interested to know that under a new law it is the duty of the physician or midwife to file a correct certificate of birth with the township, village or city clerk or with the city health officer in certain cities within ten days after the date of birth. An accurate record is thus assured which may be very valuable in after years for legal purposes. Parents should see that the births of their children have been duly recorded.



ANALYSIS OF 105 CONSECUTIVE CASES OF TYPHOID FEVER IN  
REFERENCE TO THEIR DIAGNOSIS AND TREATMENT WITH  
SPECIAL MENTION OF INTERESTING CASES.\*

RUSSELL STURGIS ROWLAND,  
Detroit.

During the summer and fall of 1903 there were 105 cases of typhoid fever admitted to the third medical service of the Boston City Hospital. They represented the average type of this disease occurring in a charity hospital. The majority were of the day laboring class; about two-thirds were of foreign extraction, one-half of these were Irish; the usual age variation occurred; the large majority were between twenty and thirty years. In over three-fourths of the cases the diagnosis was evident upon admission to the hospital, only five cases gave any difficulty in diagnosis; there were no rare complications and only the usual variety and number of common ones; there were no special methods of treatment instituted; the mortality was not remarkable.

The object of this paper, then, is not to record new and rare complications; the series is too small to add much of value to statistics or to present special methods of treatment, but rather to emphasize some of the well-known points along the line of diagnosis and treatment which were impressed upon me in the study of this disease.

I am indebted to Drs. G. B. Shattuck, J. L. Morse, and J. W. Bartol of Boston, for the privilege of using these cases. They occurred during my service as house physician.

Diagnosis—In eighty out of the 105

cases the diagnosis had already been made by the outside physician or was evident upon admission to the hospital. Eleven of remaining cases admitted with the diagnosis of typhoid fever (?) were positive on further observation. The other fourteen cases were admitted with a diagnosis of some other condition; nine of these were readily identified as typhoid fever, four caused some difficulty, and in one case the diagnosis was not made until autopsy.

During the period these cases were under observation five admitted with a diagnosis of typhoid fever were found to have some other disease; one was a case of appendicitis, one acute miliary tuberculosis, one pyemia, and two had malaria.

The number of certain and uncertain cases is what ought to be expected when we consider that eighty-three of the cases did not come under observation until some time during the second week of the disease or later. The majority at this time gave an almost typical history of gradual onset with malaise for one or two weeks followed by more definite symptoms of fever, chills, or chilly sensations, headache, nausea, vomiting, cough, diarrhoea, or constipation, and general soreness. The apathy, flushed cheeks, coated tongue, palpable spleen, and roseola present in most cases, made the picture complete and unmistakable.

The following brief analysis of symptoms occurring before or at the time of admission shows their frequency. Seventy-eight cases complained of head-

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\*Read by title before the Michigan State Medical Society at its annual meeting at Petoskey, June, 1905, and in full before the Wayne Co. Medical Society, Oct. 9, 1905.

ache which was usually localized in the frontal region and (was frequently) described as shooting over the head and down the neck. Sixty cases mentioned chills varying in intensity from severe rigor to slightly chilly sensations accompanying the fever, the latter condition was the usual one. Epistaxis only occurred in ten instances: Nausea and vomiting were mentioned as initial symptoms in sixty-two cases. Fifty-three complained of frequent loose movements, but the majority of these followed the taking of carthartics for constipation; twenty-seven complained of constipation and the remaining twenty-five had noted nothing abnormal about the bowels; forty-one cases mentioned dry hacking cough; forty-three complained of rather severe abdominal pain, general soreness was almost a universal symptom mentioned in ninety-seven cases.

On the first examination, characteristic rose-spots were observed in sixty-one cases, the roseola was unusually profuse throughout the series; the spleen was felt in fifty-four cases at this time and the pulse was relatively slow in comparison to the temperature in eighty-seven instances.

The eleven cases admitted with a diagnosis of typhoid fever (?) gave no difficulty. One case later perfectly typical was doubtful because the illness had lasted only four days; seven were made doubtful by insufficient signs and symptoms. They were all early cases. In three instances the chest symptoms (initial bronchitis) were unusually prominent. In all but the first case in this group the Widal reaction was positive the day following admission. Eighty-nine cases in the whole series gave a positive Widal reaction in a dilution of 1-80

within twenty-four to thirty-six hours after admission. Every case except two eventually gave a positive Widal reaction. Some of the cases that were doubtful at first were tried with para-typhoid cultures giving nothing but negative results. One of the cases to be mentioned later, passed through the course of typhoid fever, had a relapse and phlebitis but repeated Widal and para-typhoid tests were negative. The other case, as will be seen, died on the fourth day. The typhoid fever was proven by autopsy.

Of the fourteen cases admitted with a diagnosis of some other condition than typhoid fever, the nine readily identified were entered with the following diagnosis: Malaria, 2; pneumonia, 2; pleurisy, acute parenchymatous nephritis, alcoholism, hysteria and scarlatina, each 1.

**MALARIA.**—The two cases diagnosed malaria gave a history of sudden onset, with chills and fever, apathy and enlarged spleen completing the picture. Patients coming to the hospital with this story in Boston, where malaria is not unusual, makes this error as well as the reverse, that of calling malaria typhoid fever, a frequent one. The blood examinations soon correct the mistake.

**PNEUMONIA.**—The initial bronchitis was frequently severe enough to make the chest symptoms unduly prominent. That is what happened in one of the two cases diagnosed pneumonia; in another case there was a complicating pneumonia which at first obscured the typhoid condition. The leucocyte count, as well as the Widal test helped in all of these cases.

**PLEURISY.**—The case diagnosed pleurisy had purulent bronchitis with typhoid fever. The only reason for this diagnosis was a wrong interpretation of the physical signs which were distinctly those of bron-

chitis. Here again the blood examinations were of the first importance in making the diagnosis.

The leucocyte count, a part of the routine examination, proved to be of considerable value. Fifty-one per cent. of the cases gave a hypoleucocytosis. In 36 per cent. of the leucocyte count at the time of admission was between seven and ten thousand and in 13 per cent. the count was over ten thousand. This latter group represented severe cases with complications. It might be mentioned that not all of the complicated cases had a leucocytosis.

**NEPHRITIS.**—In rare instances typhoid fever has been mistaken for acute parenchymatous nephritis. No. 53 was such a case—A. S., male, aged 53 years. A widower of German nationality; a long-shoreman of alcoholic habit, gave a history of illness for ten days. He complained of headache, general abdominal discomfort, anorexia with nausea after eating, but no vomiting. He had the general appearance of overwork and dissipation. On admission his temperature was 100° and pulse 86; his tongue was swollen, heavily coated and tremulous. There were a few squeaky râles throughout both lungs, with rather harsh breathing; the radial arteries were considerably thickened; his heart was not enlarged; its action was regular, there was a soft systolic murmur at the base transmitted upwards, the aortic second sound was the louder; the abdomen was slightly distended, there was no tenderness; the sharp liver edge was felt 2 c. m. below the costal margin; the spleen was not felt; there were no rose-spots; the knee jerks were equally diminished; there was questionable edema about the ankles. The urine was slightly turbid, yellow,

acid, with a sp. g. 1016, a trace of albumen and no sugar. The sediment was considerable and showed many hyaline and granular casts, a few leucocytes and squamous cells and rare blood corpuscles. The patient passed through a severe and prolonged course of typhoid fever. The urine entirely cleared up during convalescence.

It is of interest to note in this series of cases that there were no serious renal complications, with possibly one exception. Albuminuria was noted in sixty-eight cases. In twenty-seven of these there was a large trace of albumen with casts, blood corpuscles and epithelial cells. One fatal case may have had acute nephritis combined with other fatal complications.

**ALCOHOLISM.**—The majority of the series gave a history of habitual use of alcohol. Case 83, J. T., aged 34 years, single, Irish, carpenter, admitted with a diagnosis of alcoholism was an extreme instance of this sort. He said he had taken from ten to fifteen whiskies daily for the past four and one-half years, and was drunk at least twice a week. During the past four weeks he had taken fifteen to eighteen whiskies daily. He had been having attacks of vomiting before breakfast, accompanied by belching of gas and twitching of muscles. There had been almost constant dull epigastric pain. The bowels had been constipated, with no movement for four days. Seven days previous to admission he had given up work because of general weakness. Observation and a positive Widal reaction corrected this mistake in diagnosis. The fever was prolonged with exaggerated nervous symptoms usual in alcoholic cases.

**HYSTERIA.**—Case 102 came in with a



diagnosis of hysteria because of the following history: M. K., female, aged 35 years, single, Irish domestic, said she had had four attacks of paralysis which came on suddenly and apparently without cause. The first attack occurred two years ago. She was confined in bed two weeks with loss of power in the right arm and left leg. There was no loss of consciousness and her general condition was good at the time. She has been "run down" for the past five months and has had to give up work several times on account of general weakness and pain in the right side. For two weeks past she had had attacks of nausea in the morning and on two occasions has vomited food. For the past week she has had a dry hacking cough and felt generally "miserable." Typhoid fever was evident on further examination.

SCARLET FEVER.—Case 30, G. W., aged 16 years, single, female. On admission had a bright erythema about the neck and upper extremities. Her cheeks were flushed and tongue was coated and had prominent papillae, making the case sufficiently suggestive of scarlatina to require isolation for further developments. The erythema extended over the entire cutaneous surface and disappeared the day following admission. There was noticeable desquamation later in the course of the disease. Desquamation was especially mentioned in eleven cases of the series.

The four cases requiring extended observation before a diagnosis could be made were entered with the following diagnoses: Metrorrhagia, typhoid or malaria (?), malignant of liver or stomach (?), and floating kidney.

METRRORRHAGIA.—Case 21, M. M.,

aged 23 years, single, Irish domestic. Was admitted to the gynaecological service with the above diagnosis. She gave a history of malaise for two weeks with cramping abdominal pains and excessive menstrual flow as the chief symptoms. If this case had not gotten into the hands of a specialist it is probable that the diagnosis would have been made earlier. The signs and symptoms were typical although obscured by the excessive menstrual flow.

Case 22. Admitted with a diagnosis of typhoid or malaria (?), presents some interesting features. W. G., aged 24 years, single, seaman, gave a history of mild typhoid fever with slow convalescence. At the time of admission there was no roseola or palpable spleen; slight irregular temperature and an absent Widal reaction. He complained of indefinite abdominal pains and tenderness, especially in the left lower quadrant. The pains were so numerous without evident cause on examination that he was suspected of shamming and discharge from the hospital considered. Two days later there was a sudden rise in temperature with swelling and tenderness of the left leg. The pain was most marked over the course of the femoral vein near Poupart's ligament, where there was local redness and tenderness. This complication seemed to favor the diagnosis of typhoid fever, but at no time were the Widal or Agglutination tests with paratyphoid cultures found positive.

Case 50. Entered with a diagnosis of malignant of liver or stomach (?). I. H. P., aged 56 years, single, born in New Brunswick, storekeeper, dates the beginning of his present illness back three months. He says that the onset has been gradual with occasional attacks of anorexia and nausea at the sight of food. He

frequently could hear a "swash" in his stomach, and usually there was a sensation of a lump in his throat after eating. He had vomited shortly after eating on several occasions during the past week. The vomitus consisted of food only, and had a sour taste. He knows he has lost considerable weight, but cannot say how much. He has been unable to work for the past twelve days on account of weakness. A test meal given in the out-patient department the day before admission showed a very low free HCL and diminished peptic digestion. It was because of these findings, the indefinite history of loss in weight, stomach symptoms and lack of other symptoms that the diagnosis of malignant disease was made. Typhoid fever did not suggest itself until the fourth day after the patient had been under observation. The temperature chart showed fever ranging from normal to  $101^{\circ}$ , with a pulse rate below 80. There were no gastric symptoms following rest in bed and liquid diet. The Widal reaction was positive in dilution of 1-80 and the leucocyte count was 4,400. This case and the following are instances where in mild typhoid fever the gastric symptoms have taken undue prominence.

Case 87. E. C., aged 53 years, single, house-keeper, was admitted with a diagnosis of "floating kidney." She said her mother's death resulted from cancer of the stomach. She had always been nervous and had "stomach trouble." Her present illness began three weeks ago with chills and fever. Since then she has been very tired and weak, although not confined to her bed. For the past few days her bowels have been loose, averaging four or five movements daily. For two days she has had epigastric pain and distress and slight hacking cough. Follow-

ing entrance the temperature continued irregular, once reaching  $101^{\circ}$ , but most of the time it was about normal. The abdomen was lax and not distended. There was slight tenderness on deep palpitation in the right upper quadrant. The right kidney was easily felt but could not account for the patient's symptoms. A test breakfast showed nothing of importance. The urine was clear and acid with sp. g. of 1017. There was slightest possible trace of albumen; sugar and diazo were both absent. The leucocyte count was 9,600. Finally, on the thirteenth day, typhoid suggested itself as a possibility and a Widal test in dilution of 1-80 was found present.

Case 29. Typhoid fever not diagnosed until autopsy. Admitting diagnosis August 10th was epilepsy, cerebral embolism (?). O. T., female, white, aged 17 years, single, was born in Springfield, Mo. Her family history was not important. She gave a previous history of poor health. She had scarlet fever when five years old which was complicated by a suppurating left ear. When 13 years old she began to have mild epileptic seizures, at first about once in every two or three months. During the past year almost every month. Recent attacks have begun with twisting of the head and body to the left. She then gives a cry and falls unconscious to the floor. Sometimes there is frothing at the mouth and the tongue is injured. Consciousness usually returns in three or four minutes, but she remains stupid and tired for the rest of the day. One month ago there was a recurrence of the discharge from the left ear. She has never menstruated.

Present illness of very sudden onset. Three days ago she awoke in the morning with a severe frontal headache and



fever. She vomited after eating and complained of dizziness and weakness when she attempted to walk. She remarked that the left side felt weaker than the right. On the day following the family physician was called. At this time the temperature was  $103^{\circ}$  and the pulse 138, and respiration 28. The patient was delirious and very weak. She had a slight suppressed cough with no expectoration. Her bowels had been regular and urine passed freely. On admission to the hospital, later in the day, she was in a state of muttering delirium, cyanotic, with a temperature of  $104^{\circ}$ , respiration 65, pulse barely felt, very poor volume, and tension over 140. There was no general glandular enlargement. There was ptosis of the left eyelid, with a suggestion of paralysis of the left side of the face. The pupils were equal, and reacted to light and accommodation. Her tongue had a dirty brown dry coat and was protruded in the median line. Her neck was apparently tender and held retracted. Examination of the chest showed diminished resonance in both bases with few fine rales and faint respirations. The heart action was rapid and regular. The abdomen was slightly distended, tympanitic, and generally tender. There were no masses felt and no rose spots. The spleen could not be felt. The liver dullness extended from the sixth rib to the costal margin, edge not felt. The knee jerks were lively and equal. There was an ankle clonus on the left. The plantar reflexes were normal. Sensation to pain was exaggerated. The urine was clear, acid in reaction, had a sp. g. of 1020. There was a trace of albumen, sugar was absent and the diazo-reaction was negative. The sediment was small in amount, consisting of few hyaline casts, small round cells, an occasional

leucocyte and squamous cells. No blood. The leucocyte count was 6,200.

August 11th, the fourth day, the patient had continued in an unconscious condition with elevated temperature, rapid, weak pulse, and rapid respirations. There was slight suppressed cough without expectoration, a profuse sero-purulent discharge from the left ear. There was no swelling or tenderness over the mastoid. The pupils were equally contracted and reacted to light, and the eyes were kept closed apparently because of photophobia. There were numerous fine crackles with dullness and faint breathing in the right lower back. The abdomen was lax; the knee jerks were diminished, there was no Kernig's or Babinski's sign. The ankle clonus persisted on the left. There was no vomiting, nourishment was refused. Rectal feeding instituted, nutrients were well retained. In spite of treatment patient failed rapidly and died, becoming very cyanotic towards the last. This case was under our observation less than 24 hours. Typhoid fever was at no time considered, because of the short course and intensity of the toxæmia. Septic pneumonia with the consolidation deep-seated and cerebral abscess were suggested and in reviewing the case either diagnosis seemed more likely than typhoid fever. The autopsy, however, showed a typical picture of typhoid fever, and a right occipital microgyria which probably accounted for the epileptic attack and indefinite localizing symptoms, causing us to suspect cerebral abscess. The lungs showed only moderate hypostatic congestion. The chronic left-sided suppurative otitis had not extended. The Widal test made at autopsy, as would be expected, was negative, while the blood cultures contained the typhoid



bacillus. The case is unusual in being one of malignant typhoid.

It is only fair to state in this connection that the most of these diagnoses were "snapped," given before admitting the patient to the hospital. Such diagnoses as malaria, alcoholism and hysteria were of this class and resulted from giving too much importance to the history. These mistakes are usually not as serious or difficult of correction as where certain symptoms are unduly prominent. The ones that occurred in order of their frequency were pulmonary, gastric and renal. The undiagnosed case was the only one in the series in which the cerebral symptoms were unduly prominent at the time the diagnosis was in doubt. Later I found pronounced cerebral symptoms most confusing in children.

The latter case illustrates well the possibilities as well as the limitations of laboratory diagnoses. The question comes to our minds as to whether a blood culture taken before death might not have given us our diagnoses in this case. We cannot say, but if the general accepted view is true that typhoid fever is primarily a general infection, then on theoretical grounds at least blood cultures ought to be our earliest and surest method of diagnosis. Blood cultures taken in several instances were only of negative value, as the cultures were either sterile or showed contamination with skin cocci. Such a method of diagnosis requires experience and equipment only found in the best laboratories and so is limited in usefulness to scientific research. The Widal test proved of more practical value, but here again laboratory facilities and experience are necessary to properly perform the test. Within the last few years a modification of the Widal test has been introduced

which has proved a useful test for the general practitioner without the laboratory facilities. It is the macroscopic application of the serum reaction to an emulsion of dead typhoid bacilli, called by the Germans Ficker's test. Like all new things in medicine, this test has its ardent advocates and critics. It is probable that the reaction is not quite as sensitive as a serum reaction, with a fresh living culture, but it has the advantages of nominal cost, that a microscope and fresh typhoid culture is not necessary, and that, for the inexperienced observer at least, there is less difficulty in distinguishing between a positive and negative reaction.

Parke, Davis & Co. have put upon the market a simple and convenient outfit for performing this test, which they call the Typhoid Agglutonometer.

A review of all the cases from a diagnostic point of view shows that the large majority were undoubted on the first examination when seen for the first time during the second week of the disease or later. During the first week a diagnosis was questionable and extended observation was usually necessary. Too much importance given to the history and individual symptoms were the commonest errors. There were no pathognomic signs or symptoms discovered. The diagnosis depended upon a general consideration of each individual case. The clinical points that appeared of most value were the characteristic elevated temperature with relatively slow pulse, the roseolar and enlarged spleen. When these signs and symptoms were absent or atypical, it was necessary to resort to certain laboratory methods of diagnosis, of these the hypoleucocytosis and Widal reaction were of the most practical value. In

cases which were entirely atypical, relapses and complications were helpful in making the diagnosis probable. It is well to remember that typhoid fever may occasionally occur as an acute malignant disease.

TREATMENT.—It is not my intention to attempt anything like a full description of treatment but rather to consider some of the points which were impressed upon me, especially in regard to the diet, hydrotherapy and general care and nursing of typhoid fever patients.

In thirty-nine cases in the series rest in bed, modified diet and nursing was all that was necessary; in the remaining sixty-six cases complications or exaggerated symptoms required more attention.

REST.—The importance of rest cannot be too frequently impressed upon both the patient and the nurse. I have found it a good plan, using proper caution and discrimination, to tell typhoid patients at the beginning that they are to have a long and rather serious illness; that it will be much to their advantage, perhaps shorten their illness, certainly lessen the dangers of complications, if they will relax mentally and physically; in other words, become infants once more and let the nurse and doctors do everything for them. It is well to think of them as such in treating the case.

DIET.—In the hospital where a large number of patients are fed, simplicity is necessary; however, practical efficiency need in no way be enhanced. Milk diluted with lime-water, beef tea and chicken broth is all that was usually given during the height of the disease at the Boston City Hospital.

Six to eight ounces of milk, besides broth, was the allowance every two to four hours during the day, and every

four hours during the night. It is as necessary to be sure that the patient gets sufficient food as to know that the character of the food and manner of giving are correct. The effect of unsufficient nourishment is quickly shown by a loss of flesh and strength and an increase of nervous symptoms. In such cases convalescence is delayed and complications are more likely. The above fact was strikingly illustrated in my experience by a change in head nurses, the regular medical nurse was transferred to another ward and a nurse who had been caring for surgical cases was put in her place. The whole state of the ward was immediately changed, because the orderly routine so necessary was not appreciated. I found that the patients were not receiving the necessary amount of food and drink; as result there was a noticeable increase in nervous symptoms and fever, especially shown by the restlessness at night and an increase in the number of baths required. Fortunately the majority of typhoid patients take their nourishment well, even during the depressed mental state at the height of the fever. If this is not the case the food should be forced, and except in special instances, in my opinion, patients should be regularly aroused for nourishment. I do not believe in "therapeutic fasting" in reference to diet. There is some danger of over-feeding, however, so that the stools should be watched and milk modified to suit the digestion of the patient given.

In instances where the food has been poorly taken certain additions to the milk are indicated. Dilute hydrochloric acid ten to fifteen minims dropped into the milk just before it is taken has a decided stomatic action and aids the digestion. A pinch of common salt in a glass of warm



milk, or the addition of barley water, sometimes has similar effect. One of the few uses I have had for alcohol in this disease is small amounts of whiskey or brandy given with the food to chronic alcoholics who are not taking sufficient nourishment and beginning to show nervous depression. Cases with gastric disturbance, anorexia, nausea and vomiting require careful treatment and at times are very difficult to manage. Milk should be partly peptonized or combined with barley gruel. In extreme instances all the food should be stopped for a short time and then begun in small amounts, gradually increasing, giving first albumen water or whey. Whey contains more food value than albumen water as usually given, and is often retained when nothing else can be kept in the stomach.

In those cases where food is poorly taken and there is nausea and vomiting, it is well to think of acid autointoxication and examine the urine for acetone and diacetic acid. I have seen a number of such cases among children. The cause of this condition is not fully understood, but experience shows that carbohydrate foods and sodium bicarbonate are strictly indicated. Barley and other cereal gruels help to meet the indications for carbohydrate food. I believe that a normal equilibrium is more nearly maintained when some cereal such as strained oatmeal or barley jelly is given in addition to the milk diet. The same result is obtained by the more liberal diet now generally advocated in typhoid fever. We find infants, after a certain age, thrive better with the addition of starches in their food, not alone because of its effects on the curds, but also because of the additional food elements. The same applies to the typhoid patient. Another point that we

learn from our experience in feeding infants is the importance of pure, fresh milk. If this cannot be obtained then the milk should be pasteurized. I should consider it a privilege in my own case under such circumstances to have Walker-Gordon milk.

**DRINK.**—Just as important as knowing that the patient receives the proper amount of nourishment is seeing that sufficient water is taken. During the depressed mental state patients do not take as much water as they ought to have unless it is given at regular intervals. From two to three quarts daily between feedings are usually not too much, when the heart and kidneys are functioning properly. Patients who are not receiving the proper amount of water quickly show it by the dry-fissure tongue and increased nervous symptoms.

**NURSING.**—Not a few cases in the series owe much to careful, intelligent nursing. We generally realize the value of good nursing when we see the ill effects of the bad. It can be truthfully said that most of the ill effect depends upon inexperience. The nurse must be made to feel her responsibility, and appreciate the importance of the points just discussed—rest, nourishment, and drink. The ideal nurse will have a quieting effect upon the patient's mental state, will not allow undue exertion in the use of the bed-pan, during the bath, or in giving nourishment, will see that the patient gets the necessary amount of food and drink and will immediately note and report sudden changes in the patient's general condition. If she has the opposite effect, and does not accomplish these ends, she ought to be dispensed with for the sake of the patient.

One of the most trying things a nurse



has to do is keeping the nose and mouth clean. A little neglect makes this difficult to do. A dry mouth covered with sordes or a stuffed-up nose has a decided ill effect upon the patient's condition. An alkaline mouth-wash should be used after each meal and at least twice a day the teeth and tongue should be mechanically cleaned.

HYDROTHERAPY.—Upon the nurse much of the success of the bath depends. In the Boston City Hospital routine Brand bath has never been instituted. In individual cases the tub method was used, but usually sponge or fan baths were given. I entered the hospital strongly in favor of the tub method, and still feel that it has more advantages and fewer disadvantages when properly carried out than the other method. Good results, however, were certainly obtained with sponge and fan baths.

The object of the bath in any given case, as we know, is to get a reaction. When we get a proper reaction the rectal temperature drops one or two degrees, the superficial vessels become dilated, the heart is slowed, the tremor is lessened, and needed sleep usually follows; as a result, the nervous system is rested, digestion is improved and elimination is stimulated.

The temperature is the usual indication by which the bath is given. In certain cases where the temperature did not reach the bath point of  $102\frac{5}{10}^{\circ}$  and there was considerable nervous depression, out of proportion to the temperature, baths were of the first importance and should be kept up. In delirium, with marked restlessness and excitability, fan baths proved less disturbing and more efficient than sponge baths in certain cases. This was especially true with children who are more

apt to get excited and worry about the baths than adults. As fan baths have proved useful, I give in brief the technique as used in the Boston City Hospital. Cold compresses are applied to the head, axillae and groins as in the sponge baths. An ordinary strip of surgical gauze large enough to cover the body when folded once is rung fairly dry from water at  $110^{\circ}$  F., and is then applied closely to the body, with the patient partially on the side. Palm leaf fans are used, the patient is fanned slowly for from five to ten minutes, the gauze being sprinkled as it dries or redipped in the warm water and reapplied. The patient is then turned to the other side and the same process repeated. The cold compresses on the head and the flexures should be changed frequently. Rapid sponging up and down the spine for a moment adds to the efficacy of the bath. Although this method lacks the element of friction so necessary in the tub and sponge bath, there was usually a good reaction and it was less disturbing to the patient.

Occasionally it would be reported that the temperature went up after the bath, instead of coming down. In such cases the pulse also becomes accelerated and the nervous symptoms more excited. I believe that in most instances this resulted from too rapid cooling with insufficient friction. It was invariably remedied by giving a milder bath for a longer time and with more friction in case of the sponge and tub bath.

The good effects of the bath are evident in almost every case, or, perhaps, I had better say in every case, when given with proper judgment and discrimination. I had occasion to care for a series of typhoids among children immediately after caring for these adult cases. The

same hydrotherapeutic measures were adopted. I was soon convinced that they require somewhat different management. One case I shall never forget. The nurse repeatedly reported that the baths seemed to be increasing the child's delirium, and were making him weaker. There was very little influence on the temperature, which remained about 104. With my strong belief in hydrotherapy, I doubted her statement, and began giving the baths myself. We tried several modifications, all of which produced fear and excitement on the part of the patient. Finally the baths were discontinued. Almost immediately the temperature began to fall, with a coincident improvement in the general condition. This was not the only instance of this sort observed. In quoting these failures and difficulties I hope that I shall not leave the impression that I do not consider hydrotherapeutic measures of the first importance in the treatment of this disease. I simply wish to emphasize the fact that hydrotherapy must not be considered entirely as a routine measure, and that the attending physician must hold himself responsible to fully instruct the nurse as to the details, and treat each case to some extent as an individual.

**BOWELS.**—Intelligent management of the bowels is another essential factor in the care of the typhoid fever patient. A suds enema every other day was all that was necessary in the majority of cases. If the bowels had been constipated previous to admission and the disease had not advanced beyond the ninth day, repeated small doses of calomel were given and followed by a suds enema. On the other hand, if there had been much diarrhoea, castor oil was preferred. Cathartics were not considered without danger and were not given without the above indications.

In cases where diarrhoea was a serious symptom, in the course of the disease a change in diet was usually sufficient to control the condition. Barley gruel for two or three days, with gradual return to a mixed diet, proved efficient both in diarrhoea and tympanites. During convalescence, one of the most frequent causes of recrudescence was constipation. The colon would be found full of scybalae even after the daily suds enema had been given with reported good result. In these cases small doses of castor oil or seidlitz powder, assisted by an oil enema, relieved the condition.

**HEMORRHAGE.**—During the likely period of hemorrhage, streaks of blood in the stools were taken as a warning of something more serious. In three cases small amounts of blood were noticed several days before a severe hemorrhage. Such cases should be treated accordingly, until the danger is past. When hemorrhages occurred it was customary to give a full dose of morphine, usually combined with atropine. This was repeated whenever there was restlessness. There were standing rules that such patients were not to be moved, except by order of the physician. The dejections were allowed to pass into an absorbent oakum pad until evidence of active bleeding were passed. Only cracked ice, albumen water, and whey were allowed at first with a gradual return to the regular diet. Osler's acid diarrhoea mixture and adrenalin chloride were the only drugs used. In cases where the loss of blood had been considerable, daily enemata of normal salt solution hastened convalescence. In extreme cases, salt solution given subcutaneously, was apparently a life-saver. It has surprised me to see what extremely sick hemorrhage cases sometimes recover.



PERFORATION.—No one of us doubts but that intestinal perforation in typhoid fever is a surgical condition which should be given the earliest opportunity for an operation. It is the physician's duty to appreciate this point and be quick in sharing his responsibility with the surgeon. The patient can be told with all honesty that exploratory laparotomy adds very little to the seriousness of his condition and that immediate surgical treatment adds much to his chance of recovery. One point that does not receive enough consideration in some cases is the post-operative treatment. This is the time when it is of first importance for the surgeon to share his responsibility with the physician. It is my opinion that the surgeon ought to treat just the surgical condition and leave the general care of the case in the hands of the attending physician as far as possible. This would help to increase the percentage of recoveries following operation.

A few very general remarks on the care of convalescence and then I shall be through. When the temperature begins to drop, the physician and nurse cannot let up on their watchfulness; this is one of the most trying times. The patient begins to regain strength and appetite. He is anxious to be doing things, but must be admonished and told not to be in a hurry or he will be sick over again. True relapses with return of fever—in most cases spleen and rose-spots—occurred in nine cases. Two followed the eating of solid food brought in by friends (?). In one instance oranges and nuts, and in another taffy candy. In five cases there was a definite story of overexertion. Two of these cases returned after having been discharged from the hospital. In

two cases it was noted that the spleen was still enlarged, although the temperature had been normal for the usual number of days. It is probable that a swollen spleen denotes continued activity of the disease process, and experience shows that it is not safe to allow patients to begin convalescent treatment until the spleen has returned to nearly its normal size.

On the third medical service, Boston City Hospital, it was customary not to increase the diet until the temperature had reached the normal level, then beginning with soft solids. First, milk toast, followed on successive days by the addition of farina, corn starch, custard, and soft eggs, if this increased feeding did not affect the temperature. When a good, generous diet could be taken without ill effect, and there was apparent gain in strength, the patients were given a head-rest and gradually gotten up and about. Usually this required from ten days to two weeks. In rare instances, where a slight irregular temperature persisted beyond the usual time, convalescence was hastened by feeding and getting these patients up.

In conclusion, let me again emphasize the value of care and good nursing in the treatment of typhoid fever. Close and continuous observation and attention to details are the physician's duties. He must keep constantly in mind the day of the disease in association with the pathological process; he must know that his patient is getting the proper amount of fresh air and sleep, nourishment and drink; he should examine his patient often enough to keep a mental picture of his physical condition, especially of the lungs, heart, and abdomen.



## WHY SURGICAL FIXATION OF A MOVABLE KIDNEY WILL NOT RELIEVE DYSPEPTIC AND NERVOUS SYMPTOMS.\*

CHARLES D. AARON,  
Detroit, Mich.

Surgeons have been perplexed by not being able to relieve patients of dyspeptic and nervous symptoms by suturing a movable kidney. It was thought the cause was that the kidney did not remain in its proper position after being anchored. On this account many different operations were devised to find the one *par excellence* for a good result. It was the opinion of some that the kidney was sutured too near the diaphragm, of others not far enough away, of others that the kidney tilted one way or another, of others that it turned upon itself, yet all have been disappointed in not being able to relieve the dyspeptic and nervous symptoms by this operation. Hardly a week passes but some surgeon suggests a better surgical method for anchoring a kidney. If the dyspeptic and nervous symptoms were controlled through this operation there would not be so many different methods promulgated. The many methods of operation are analogous to the many drugs recommended for sea-sickness, none of which is efficacious.

Every physician of experience has observed patients who have had movable kidneys anchored and thus been made permanent invalids. Such cases in my own practice led me to endeavor to relieve this condition by properly fitted bands. It is not a question as to the success of the operation from a surgical standpoint, but whether the dyspeptic and nervous symptoms can be relieved. Many surgeons are

beginning to realize that movable kidney is more a medical than a surgical disease.

Glénard,<sup>1</sup> as early as 1885, called our attention to the fact that in every case of movable kidney a careful examination of the abdomen would disclose a dislocation of the stomach, or part of the intestine. This has since been verified by many investigators. We now know that movable kidney is usually an incident to general ptosis, and symptoms referable to the kidney are mainly due to intestinal displacement. The starting point of a movable kidney is the sagging in the flexure of the ascending colon. This is followed by sagging of the transverse colon which brings about traction on the pylorus which may cause a displacement of the stomach. Ptosis of the hepatic flexure of the colon brings about traction on the peritoneum, and encourages a downward and inward displacement of the right kidney. For this reason whenever a movable kidney is found it is an indication of a dislocation of the stomach or part of the intestine.

Since my report on the "Treatment of 442 Cases of Movable Kidney without Surgical Intervention,"<sup>2</sup> others are beginning to agree that movable kidney is a medical and not a surgical disease, and that surgical intervention is called for in only a limited number of cases. Many surgeons, to whom patients with movable kidney are referred, refuse to operate upon them. Sir Frederick Tieves<sup>3</sup> has abandoned the operative treatment for movable kidney, and says: "The time is not far distant when suturing the kidney will be one of the rare operations of sur-

\*Read before the Michigan State Medical Society at Petoskey, Mich., June, 1905.

gery." He has made use of a truss with perfect satisfaction in 300 cases of movable kidney.

According to Israel,<sup>4</sup> operation for movable kidney is irrational because the symptoms attributed to movable kidney are only in a small number of cases related to this displacement. These symptoms are mainly caused by a displacement of some of the other organs in the abdominal cavity. This author, in his recent work on "Surgery of the Kidney"<sup>5</sup> says: "The modern treatment of movable kidney leads me to believe that there is too great activity regarding operation, but I feel that this tendency will not last longer than some other operations with which we have had experience. A short time ago it was thought that a large number of symptoms would be relieved by amputating the cervix or by removal of the ovaries, and now we are endeavoring to do the same thing by anchoring the kidney." He believes that surgical kidney fixation is superfluous, and refuses to operate in such cases.

A movable kidney is not a pathologic condition, for every normal kidney, on account of its attachment to the diaphragm, moves during respiration. It is only pathologic when it is palpable. We can readily see the irrationality of producing a pathologic condition by fixing a kidney that ought to be mobile. When a patient is in the dorsal decubitus position, gravity carries the kidney back to its normal position. This cannot take place when a kidney is surgically fixed, and under these circumstances we always have an abnormal condition. When the uterus is slightly adhered and immovable we may have dyspeptic and nervous symptoms. We advise radical means to relieve this condition. In cases of movable kidney,

surgeons irrationally endeavor to bring about an abnormal adhesion, and in this way induce a condition that may aggravate the symptoms we are endeavoring to relieve.

Surgeons have not been slow to realize that other than surgical means must be utilized to attain a good result in cases of movable kidney. J. Ross Watt,<sup>6</sup> consulting surgeon to Ayr County Hospital, in a "Report of Successes in the Treatment of Floating Kidney by a New Method," records his results in 18 cases without surgical operation, rest, massage, or exercise of any kind. He arranges wing-shaped sheet-lead plates attached to corsets that so steady the floating kidney in its position as to fix it in three or four months.

Gallant<sup>7</sup> takes the position that from 90% to 95% of women who suffer from movable kidney and associated ptosis can be relieved without operation; while a large percentage of those operated upon do not regain their health, even when the kidney is firmly fixed. The mobility of the kidney alone does not explain the extremely variable symptom-complex found in this condition. Nearly always there is displacement of other viscera and sub-normal nutrition. Treatment must aim at the replacement and support of all organs in their proper places, of correction of functional derangements, and improvement of the general health.

Gallant<sup>8</sup> in another article says: "Nephropexy, as carried out by the most experienced operators, shows a mortality of from 2% to 5%, a very considerable number of failures to anchor the kidney permanently in its normal position, even after it has been sutured a second time; many are but slightly relieved of the gastrointestinal and nervous symptoms; pain

referable to the lumbar wound is not uncommon, though some claim it is avoidable if the lumbar nerves are pushed aside; and a few instances of kidney hernia have been recorded. These considerations have led many notable surgeons, and the author, who formerly endeavored to fix these wandering kidneys, to a more careful selection of cases."

In a report of 100 cases of different grades of movable kidney, Madsen<sup>9</sup> concludes: "In none of these cases could we consider that surgical interference was called for."

McWilliams<sup>10</sup> reports 61 cases of movable kidney treated surgically in one of the New York hospitals. On the subject of treatment, he believes that the profession has been too optimistic concerning results of operation, and he agrees with Israel in the belief, that the only absolute operative indications are the result of pulling and kinking of the pedicle, particularly if these attacks are accompanied with retention. The natural conclusion to be drawn from all the information at hand is that a comparatively small percentage of those with wandering kidney should be operated upon.

With selected cases and newer methods of surgical fixation of movable kidney, the results up to date are poor. Balch and Torbet<sup>11</sup> record "Actual Results at the Massachusetts General Hospital Following Operative Treatment of Ptosis of the Abdominal Organs, with Special Reference to the Kidney, between 1890 and 1904," as follows:

Cases: Male, 6; female, 86; total, 92.	
Relieved.....	28
Not benefited.....	13
Not heard from.....	51
Total.....	92

Such poor results lead Balch to believe that in private practice, where one can

choose the cases for operation and for supporters, the results are much better than hospital work.

Why do we get such poor results in surgical fixation of movable kidney when it is performed by our best operators? It is because the kidney is not the organ causing the symptoms we want to relieve. A displaced stomach or intestine is the cause, and this must be removed before patients feel better. Rose,<sup>12</sup> speaking of movable kidney as a cause of dyspeptic and nervous symptoms, aptly says: "Schleiden has shown that some natural philosophers have accused the moon of influences on events in nature of which she is innocent, and compares the role the moon is made to play with the role of the cat accused of having broken dishes, while the kitchen maid is the malefactor. This applies to the role the floating kidney is made to play in regard to gastric and nervous symptoms."

It is true that patients seem to improve for a time immediately after anchoring the kidney. This is due to the patients lying on their back, when the viscera naturally fall into their normal position and thus functionate better. Soon after they begin to stand on their feet the whole list of dyspeptic and nervous symptoms returns. Weir Mitchell more than 20 years ago suggested that we keep all patients with movable kidney in bed and treat them with forced feeding. In this way he succeeded in relieving his patients. The same thing can now be done without compelling the patients to go to bed, by having them wear a properly fitting abdominal band that replaces all dislocated organs.

The anatomic relations of the hepatic flexure of the colon to the right kidney show how its displacement may drag the



kidney with it, yet its attachment is not strong enough to raise the hepatic flexure by surgical fixation of the right kidney. The left kidney is not as firmly connected with the splenic flexure as the right kidney is with the hepatic flexure. There is less likelihood for displacement of the splenic flexure, as this has an unusually firm attachment by means of the costocolic ligament, which has nothing like it on the opposite side. Besides, the left kidney is held firmly by the tail of the pancreas, which is firmly fastened to the posterior wall and therefore not so susceptible to being dragged down by a displaced colon.

Every condition that acts as an etiological factor in producing a weakness of the kidney attachment, favors a falling of the abdominal organs. The kidneys are held in position by their attachment to adjacent structures and by intraabdominal pressure. Any displacement is due to weakening of the attachments and interference with intraabdominal pressure. This pressure is weakened by an enlarged liver, relaxed stomach or displacement of any organ in the abdominal cavity, relaxation of abdominal walls, injuries to the pelvic floor, abdominal section, labor, and acute diseases associated with emaciation. Bacon<sup>13</sup> believes there can be but little doubt that the displacement of the stomach and colon helps to cause a movable kidney. Stiller,<sup>14</sup> who was the first to note that the tenth rib was movable in these cases, declares that a movable kidney is a local manifestation of a general condition.

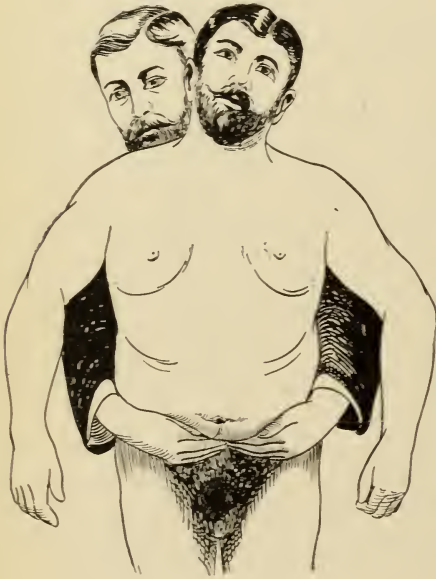
The study of several hundred cases in my own practice, leads me to believe that movable kidney in itself cannot produce all the dyspeptic and nervous symptoms of which patients complain, unless there is a displacement of some other organ in the

abdomen. Many patients have a movable kidney without suffering any discomfort. I repeat what I have frequently said, that cases in which the kidney alone is movable, are those that give few or no symptoms. It must be remembered that the stomach may be displaced anywhere from its normal position to the symphysis; the same thing may take place with the intestines, liver or spleen. My results in over 600 cases, with a properly fitting band, have proved eminently satisfactory. Before fitting a band to patients with movable kidney, the location of all the abdominal organs must be accurately made out. This is done by palpation, auscultatory percussion, trans-illumination, inflation, röntgen ray, etc.

Location of the intestines is best made out by palpation. The transverse colon lies usually immediately beneath the large curvature of the stomach; when the position of the latter varies, a like variation in the position of the transverse colon takes place. The section of the transverse colon which is accessible to palpation, has either a horizontal direction, as is the case when the transverse colon is high, or it is bow-shaped, with the convexity downward. Prolapse of the transverse colon is quite common, and there are cases in which it takes the form of the letter V. In palpation of the transverse colon a dislocation can be easily made out. The transverse colon is felt in most cases as a soft rope; under pressure, low gurglings are heard; these suggest pulpy contents mixed with gases. In the majority of instances, when a movable kidney is found, it serves as an index that other organs of the abdominal cavity are displaced. All displacements must be corrected with a properly fitting band before we can attain a good result. The replacing of the

abdominal organs gives the patients almost immediate relief. They stand more erect, breathe easier, pain in the back ceases, feeling of heaviness in the legs disappears, nervous symptoms subside, digestive disorders cease, abdominal pain stops and circulatory disturbances are regulated and patients continue to improve from the beginning.

To prove that a band is indicated in a given case, the physician should stand be-



hind the patient, passing his arms on either side and placing both of his hands on the lower abdominal wall (Fig. 1). When the hands of the physician are in this position, the abdominal mass just above the pubes can be easily raised. By supporting the abdomen in this way the patient will immediately say that he feels much better. Removing the hands suddenly allows the abdominal mass to fall, which produces a distressing sensation due to the falling of the displaced viscera. This is a positive test for the beneficial effects of a band. When the patient has no relief from lifting the abdomen, and

feels better when allowing the abdomen to fall, the band is not indicated.

In a recent article Einhorn<sup>15</sup> says: "That a movable kidney may be entirely cured by medical means was first proved by Henderson. I have since observed such cases. Notwithstanding the importance of this subject, not much is to be found about it in literature, and the fact that prolapsed kidney may be restored to a normal position has certainly not become generally known to physicians." After reporting several successful cases, he adds: "As will be gathered from the above histories, the treatment consists mainly in the wearing of a properly fitted abdominal supporter and ample feeding." Stengel<sup>16</sup> on the treatment of movable kidney, says: "The perirenal fat can be restored by forced feeding. Another plan to be used in the majority of cases is to support the kidney by a properly placed pad or bandage. A pad to be effective should make pressure upward, backward, and toward the right." Iapovski<sup>17</sup> says: "In cases in which the symptoms are the result of nervous irritability, it is better to use the expectant plan by strengthening the patient to overcome his nervous disturbance. The measures to be employed for this purpose are the wearing of a properly constructed abdominal support and proper feeding."

Glénard, Kuttner, Ewald, Boas, Rosenheim, Strauss, Riegel, Stiller, Kelling, Einhorn, and others, believe in a properly fitted belt. Rose, Weissmann, Rosenwasser, Schmitz, Clemm, and others, recommend the plaster belt. They all agree that a proper support of the abdomen brings about a restoration of the nor-

mal diaphragmatic breathing, and in this way helps the cure.

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## DISCUSSION.

H. W. LONGYEAR,  
Detroit.

There is no question in my mind but that properly fitted abdominal bands give great relief to symptoms in many cases of nephroptosis. But patients get tired of wearing them, especially when they only partly relieve, as is frequently the case, and then the operation is the question. When we consider that the first operation, by Hahn, was done only a little more than twenty years ago, it is no wonder that it is not yet perfected. When we also consider the great variety of opinions on the etiologic question of the matter, we wonder less that operative procedures are

still unsatisfactory—as they admittedly are. All kinds of reasons are given for the dropping of the kidney, but hardly any thus far are satisfactory. Why does the right kidney prolapse fifteen times to the left once? Why is it the right loose kidney alone that gives the symptoms attributed to it? I think I have an answer to these questions, and with the view will be the suggestion for a satisfactory operation. I have lately been making some observations in this line, both on the cadaver and on the living subject, and find that there is a distinct cord or tendon, formed by the growing together of the foremost of the fatty capsule, into a prolongation of peritoneal strands which pass down from the lower part of the kidney to the posterior wall of the ascending colon, where it is firmly attached. This results in the full caecum pulling the kidney down, and as the duodenum is closely attached to the fatty capsule, at its inner aspect, this viscus is pulled upon. Hence we have the digestive disturbances and also the explanation of the fact that it is the right kidney that usually comes down, and the right kidney that gives the symptoms. Founded on the fact of the presence of this ligament, from the lower pole of the kidney to the bowel, I am devising an operation which I hope will be successful in curing not only the displaced kidney, but also the prolapsed caecum, which usually attends these cases.

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WILLIAM BISHOP, Bay City: For the past ten (10) years I have been listening to medical and surgical papers from the Atlantic to the Pacific and this paper is the most unusual one I have ever heard.

As day by day we realize how one by one and score by score of the medical diseases are appropriated by the surgeon, it is surprising to find a man who claims to have reclaimed for permanent cure a condition once having been amenable to surgical treatment only.

If the doctor's contention is proven by subsequent demonstration I will crown him with an halo of gratitude.

The cases of nephroptosis coming under my care have never been cured of their nervous and dyspeptic symptoms whether treated medically or surgically unless some other pathological condition such as a diseased appendix, gall bladder, ulcer of stomach, or pelvic organs is discovered and removed.

Floating kidneys do not produce permanent or persistent symptoms.



## INDIGESTION IN INFANTS IS THE MOST FREQUENT CAUSE OF SUMMER DIARRHŒAS.\*

CHARLES DOUGLAS,  
Detroit, Mich.

Indigestion in infants is always due to the disproportion between the fat, proteids and sugar which an infant receives at each meal and the amount of digestive fluids which are secreted and necessary for the conversion of each of these foods into healthy aliment; or it is due to an error in the whole quantity or quality of foods or other substances which are introduced into the stomach. Nature supplies glands in the human digestive tract which secrete fluids respectively suited for digesting these three different foods—fat, proteids and sugar—but she has not provided for the digestion of any other than the milk form of these foods, except in very small quantities.

A laxative is something which cannot be digested, consequently all indigestible foods become laxatives. They are foreign to the digestive tract, and nature's plan is to cast out everything which enters this tube when it cannot be digested perfectly and thereby utilized in heating the infant or in building up new tissues and thus securing growth. This casting out of unsuitable foods is generally known as diarrhœa. All articles which are subject to fermentation or decomposition under the influence of heat or moisture make these changes rapidly, and become laxatives after they enter the digestive tract if there is not sufficient digestive fluid there to convert them into healthy pabulum. In the processes of fermentation and decomposition, new products are formed

which are often of a very irritating and poisonous nature. Some of these can be absorbed to a moderate extent but the great majority of them are so foreign to the human economy that nature's usual resources are promptly called upon to dislodge them either by vomiting or purgation or by both processes together. In this way, they become emetics or laxatives and their repetition produces gastritis or diarrhœa. Where these poisonous products are absorbed, toxemic results with highly feverish disturbances following quickly, causing meningeal, spinal and nephritic irritations which may act seriously if the elimination through the bowels and kidneys does not remove these toxemic products rapidly.

Decomposition or fermentation of foods produces irritation either in the stomach or bowels. When this occurs in the stomach, it causes acute inflammatory disturbance which is commonly designated as indigestion with the usual symptoms of gassy eructations, nausea, more or less vomiting and feverish disturbances in proportion to the intensity of the irritation and the frequency with which it is repeated. When this decomposition occurs below the pylorus, it causes enteritis or irritation of the lining of the intestinal tract from that point to the anus. This irritation is dangerous according to its intensity and duration and is commonly designated as duodinitis, colic, diarrhœa, cholera infantum, colitis or dysentery according to the character of the stools. These different terms are only names for nature's efforts to first dislodge this irri-

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\*Read at the Petoskey meeting of the Michigan State Medical Society, 1905.

tating and poisonous material, and secondly to relieve the subsequent inflammatory processes produced by this decomposing food. While decomposing food is not the only force causing these diseases, it is undoubtedly the most active and powerful one contributing to these results and its absence would prevent the vast majority of these diseases.

Whether this inequality between food and the power of the digestive fluid is due to errors in the dietary of a healthy infant, to errors in the quality of the digestive fluids caused by sicknesses such as infectious diseases, exposure, changes of the seasons, cold or whatever else, it is immaterial. The result is a determined effort of nature to dislodge decomposing products by emesis or diarrhœa. This is always the natural result. The usual difficulties with which the physician has to contend affords through careful intelligent inspection of the stools, good reading material of the exciting cause, and the cure depends very greatly upon his ability to do this reading correctly.

It is not my intention to go into the details of the many etiological factors which assist in producing these disturbances. It is the desire of the writer to touch only upon these attacks produced by the regular foods of infancy which so frequently are caused by errors in quantity and quality. The errors caused by varieties of those foods, when unsuitably given to infants, can be read in the same way.

As only the milk variety of these three foods—fat, proteids and sugar—is utilized by nature in nourishing the infant, all the errors occurring from the use of them during the first two years which cause stomach and bowel disturbances can be traced to the improper quality or quantity

of these foods in the infant's dietary. Where starches such as oatmeal, rice, barley, wheat flour, imperial granum, Mellin's food, Horlick's food, Eskay's Nestle's, Allenbury's, or indeed any other of the proprietary foods, or even bread, crackers or toast are used like sugar in excess of the digestive power they come under the same ban of injurious foods as does the excessive sugar in foods, because all these different forms of foods are starches and may be called sugars, for they are digested by the same fluids as are the different forms of sugar. All starches are converted into sugar in the process of digestion.

Perfect digestion of all foods is shown by one or two stools each day of an even yellowish color, and by retaining formation or shape after being voided as do those of the healthy adult. Such stools have no putrid or foul odor, and infants enjoying such digestion do not suffer from colic, have little gassy discharges, sleep well at night, and are happy in day time. These infants grow steadily.

The infant who is overfed even with suitable foods, or who receives foods which it is unable to digest perfectly gives the opposite picture, one very dry crumbly stool or several soft ones daily, showing no formation but on the contrary are soft or splashy in character, mixed in colors, and have a sour putrid or foul odor. This infant suffers from colic, has frequent gassy discharges from the mouth or anus, sleeps poorly and is altogether very unhappy when awake.

In feeding a large number of infants, the writer, in order to avoid mistakes, was compelled to prepare a chart which would show all foods and the amounts given daily, the sizes of the meals, and the results on the infants as shown by the

weight, stools, sleep and temperature. These feeding charts are filled each day by the mothers who by examining the stools become very expert in detecting the smallest errors in quantity or quality of foods consumed daily. In this way the writer has accumulated over fifteen thousand daily records of the foods consumed, their exact amounts, and also the exact results produced each day on every infant.

As errors are being continually made in the amounts of fat, proteids and sugar or starches which are fed daily, very frequent opportunities are presented of seeing the effect these errors produce on the stools, and the general condition of the infants also. So decided, uniform, and unmistakable are these results that it soon becomes an easy matter for the mother to detect at once whether it is the fat, proteid, sugar, or starch which is causing the unhealthy number and appearance of the stools.

The following chart No. 1 is an exact copy of a six day one made by a mother.

The first 16 items show correct use of foods and the results shown in the items from 18 to 32 prove the correctness of the work. Such answers as this chart shows always guarantee success.

Chart No. 2 illustrates the bad results produced by too liberal amounts in each of the foods, and shows what frequently appears on these charts when mistakes are made. In these cases the foods are in excess of the digestive power of the fluid secreted at that meal for the particular food which decomposed, and were hastily or violently thrown out by nature through the anus in an effort to protect the infant from these poisonous and injurious products lying in the alimentary canal.

Nature's hurried and protective work is

always shown by pain, frequent stools, loss of appetite, disturbed sleep, and high temperature, all of which are recognized by physicians as our summer diarrhœa, cholera infantum, enteritis, colitis, dysentery, etc., according to the appearance of the stools. These acutely observing mothers, who fill these charts, explain these results to me by saying they have fed too much fat, proteid, sugar, or starch, and forthwith correct the disturbance by reducing that food which they think causes the error.

The results demonstrated by these charts prove the correctness of our generally accepted dietetic treatment in the early stages of all forms of diarrhœal or bowel disturbance. They are the following:

1. That greasy stools call for less or no fat in the food.
2. That cholera infantum calls for the removal of all sugar from the dietary. The sugar in milk calls for its removal.
3. That dysenteric or mucous stools forbid the use of all proteids.
4. That mixed varicolored stools call for a general reduced dietary, and that these reductions must be in direct proportion to the severity of the symptoms,—very frequent stools or high temperature demanding total abstinence from food and only a little whiskey or brandy with water for the first few days of treatment.

Starch waters are admissable in mild cases from the beginning of the attacks, and after the first few days in severe attacks also. With a tendency to formed stools, experience with these charts allows a gradual return to the prohibited foods.



NAME—C. F. H.

AGE—4 mo. 1 week.

	Oz. Teaspoon	Oz. Teaspoon	Oz. Teaspoon	Oz. Teaspoon	Oz. Teaspoon	Oz. Teaspoon
1 Date Sept.....	27	28	29	30	1	2
2 Cream .....	3	3	3	3	3	3
3 Human Milk.....						
4 Skim Milk.....	19	19	19	19	19	19
5 Whey .....						
6 Lime Water. ....	3	3	3	3	3	3
7 Boiling Water.....	22	22	22	22	22	22
8 Milk-Sugar.....	1½	1½	1½	1½	1½	1½
9 Rice flakes Starch...	1-3	2-0	2-1	2-2	2-3	2-4
10 Oat Flakes.....				0-3	0-3	0 3
11 Unused Food .....	5	4	4			
12 Feed how Often.....	When hungry	When hungry	When hungry	When hungry	When hungry	When hungry
13 Day meals, No.....	2-4	6	6	6	6	4 - - - 2
6 A. M. to Size.....	4-4½ oz.					
6 P. M. ....		4-½ oz.	4-½	4-½	4-½	4-½ 5
14 Night No.....	2 1	2 1	2 1	3	2 1	3
Meals Size.....	5-½ 5	5-½ 5	5-½ 5	5-½	5½ 6	5-½
15 Whole day's Food....	42	43	43	43½	44	44½
16 Whole No. of meals..	9	9	9	9	9	9
17 Spits Vomits.....	Natural	Natural	Natural	Natural	Natural	Natural
18 Medicine .....						
19 No. of stools.....	1	1	1	1	1	1
20 Color.....	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
21 Odor nat. or foul....	Natural	Natural	Natural	Natural	Natural	Natural
22 Kind, splashy, soft or formed .....	Formed	Formed	Formed	Formed	Formed	Formed
23 Colic, Yes or No.....	No	No	No	No	No	No
24 Gas, Nat. or more....	Natural	Natural	Natural	Natural	Natural	Natural
25 Gas, Up or Down.....	Natural	Natural	Natural	Natural	Natural	Natural
26 Sleep, Day, Night....	Good	Good	Good	Good	Good	Good
27 Temper, Good, Cross.	Good	Good	Good	Good	Good	Good
28 Hungry before meals	5 to 10 Min.	5 to 10 Min.	5 to 10 Min.	5 to 10 Min.	5 to 10 Min.	5 to 10 Min.
29 Temperature Feverish or Not.....	Natural	Natural	Natural	Natural	Natural	Natural
30 Urine.....						
31 Weight.....	14-13	14-14	14-15	15-2	15-1	15-3

CHART No. 2.

	OVERFEEDING OF			
	CREAM SHOWS	SUGAR SHOWS	PROTEIDS SHOWS	TOO LARGE MEALS SHOWS
Vomiting .....	Yes	Yes	No	Yes
Number of Stools .....	4 to 6 Daily	4 to 12 Daily	3 to 10 Daily	2 to 4
Color .....	Yellow	Green or White	Mostly Green	Mixed
Odor.....	Putrid	Sour or Foul	Foul	Foul and Sour
Kind .....	Soft and Greasy	Watery or Splashy	Mucous or Slimy	Mucous Watery or Greasy
Colic.....	Yes	Yes	Yes	Yes
Gas.....	Yes	Very Much	Some	Yes
Sleep .....	Poor	Poor	Poor	Poor
Fever .....	100° to 101°	100° to 104°	99° to 101°	Variable
Weight.....	Stationary or Losing	Losing Rapidly	Losing Steadily	Losing a Little

## The Journal of the Michigan State Medical Society

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JANUARY, 1906

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### Editorial.

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#### NINETEEN HUNDRED AND FIVE.

During 1905 there have been a number of valuable contributions to the science of medicine. There has also been in evidence an enthusiasm on the part of the profession, not only for improving its own condition and uplifting its own members, but also for acquainting the laity with certain important truths, a more thorough knowledge of which will go far toward increasing human health and happiness.

Much of the scientific work has been along the line of testing the truth or falsity of previous discoveries, more especially in defining more clearly the limitations of certain diagnostic procedures, such as cryoscopy, blood pressure determinations and the macroscopic Widal test. Nevertheless, most important new work has been done, notably by Hektoen, on the purification, by filtration, of the virus of measles and the inoculability of that disease; by Wollstein, on the agglutination of the blood in pertussis, and by Dyers, on the production of a serum—*leprolin*—prepared from the bacillus of leprosy.

The most noteworthy event in medical science was the discovery of the etiology of syphilis by Schaudinn and Hoffmann, who early in the year described the *spirochaete pallida*. At first looked upon with

distrust, the work of these investigators has been apparently confirmed in many hundreds of cases and in various parts of the world, so that we have almost positive assurance of the truth of their assertion. The inoculation of the lower animals with syphilis has been carried, during the past year, farther than ever before.

In the United States, we have passed through two epidemics, the one of cerebrospinal meningitis and the other of yellow fever. The results of the efforts of control in the former disease were discouraging; in the latter, magnificent. The practical application of the mosquito theory has saved thousands of lives and millions of dollars.

The American Medical Association has done much during the year just closed. It has shown a commendable interest in medical colleges, the first meeting of the Council of Education having been held during the year. Valuable data concerning students has been published in the Journal, and from it we learn that the number of medical students is less than at any time since 1900. This may be explained both by the increased requirements and by the great prosperity of the country. One of the most important steps ever taken by our national society was the establishment of the Council of Pharmacy and Chemistry. We may well be proud of the foremost position which Michigan has taken in the inception of this idea. Active steps have also been taken toward the national incorporation of the A. M. A.

Medical legislation in the various states has been, on the whole, encouraging. Compulsory vaccination has been upheld by the Supreme Court of Massachusetts and an act repealing the same has failed in California. Iowa has a new and ad-

mirable registration law; Kentucky has provided for the disinfection of all railroad cars; the powers of state boards have been increased in various states; many municipalities have passed anti-spitting laws and there is a distinct tendency to increase the scope and authority of Boards of Health.

The County Societies—the most important branches of medical organization—both in this and in other states, have enjoyed unprecedented success. There is a noticeable movement on the part of the county society to aid in the “business end” as well as in the scientific work of its members. Instances of this may be cited in the Defense League of the Wayne County Society and the collection department of the Cleveland society. Above all, there is a tendency toward “unity, peace and concord,” without which any organization must fail.

Perhaps the most encouraging feature of 1905 was the great increase in popular interest and knowledge on certain medical topics. The crusade against tuberculosis has taken immense strides, so that to-day the working man knows more about its infectiousness and its prophylaxis than did the educated man three years ago. There are now no less than 48 American and five Canadian associations among the laity which have for their object the dissemination of knowledge concerning the prevention of tuberculosis.

We note, with sadness, that the men who did much of the pioneer work, on which modern medicine is founded, are passing away. During the year there were lost to science, Abbe, the physicist, known to all as the inventor of the Abbe condenser; Meissner, the physiologist, whose name will always be associated with the plexus of nerves in the walls of

the intestine; Wernicke, whose sign, that of the hemiopic pupillary reflex, will forever be used by neurologists; Mikulicz, the surgeon, whose name many contrivances bear, and Nothnagel, than whom there has never been a more scholarly and astute clinician.

BENJAMIN R. SCHENCK.

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### THE IMPORTANCE OF THE EXAMINATION OF HUMAN BREAST MILK.

Those physicians who have to do with infants lose a very valuable prognostic and therapeutic aid if they do not in selected cases analyze the breast milk. Two recent cases in the practice of the writer emphasize the fact in opposite ways.

Mrs. H. last July brought a child aged five months suffering from eczema capitis of eight weeks duration. The child was entirely breast-fed. It had been treated by two physicians, one in Chicago and one in Detroit according to the latest approved methods for eczema. But after eight weeks the head was worse than ever, patches had appeared on the arms and hands, and there was the usual upset household, a baby shrieking by day and night and a mother and nurse worn out by loss of sleep. The excellent local treatment of the eczema having been without effect, a cause for the condition was immediately sought in the nutrition of the child. A sample of the mother's milk was examined and showed between one and two per cent. of fat with a specific gravity indicating deficient proteids. The number of nursings per day was immediately reduced, two good bottle feedings of a suitable formula were given the child, the former local treatment for the eczema continued, and an effort was made to improve the mother's milk by diet and tonics. By



the end of a week, the child showed a slight improvement but a second examination of the breast milk gave only a little more than two per cent of fat. Two more bottle feedings were ordered at once and the nursings reduced to three a day. In two weeks the child was entirely well and in the four months since, the eczema has never returned.

Mrs. S.'s baby, five days old, with ten stools a day, not meconium. Stools loose, smooth, deep orange color, usual healthy aromatic odor, acid reaction; microscopically showed an abundance of fat drops, and lakelets. Examination of breast-milk showed over seven per cent. of fat. Regulation of mother's diet brought the fat down nearly to normal in about ten days, the stools were reduced to six and later to four, the child remaining well. No medicine was given either mother or child. The history of the pregnancy accounted for the high per cent of fat in this case. There had been a persistent glycosuria and the physician in attendance had eliminated carbohydrates from the diet. The patient then, for a number of months had been getting a diet composed almost exclusively of proteid and fat, and the composition of the milk after delivery was just what might have been predicted from the diet.

In each of these cases, the therapeutic key which led to prompt and satisfactory recovery was furnished by the analysis of the breast-milk. Many cases of indigestion and diarrhea in breast-fed infants, will give similar results. The necessary analysis can be done by any practitioner who does not have access to a clinical laboratory. Holt's milk-testing apparatus can be bought for two dollars. If one has a water or electric centrifuge, it is only necessary to have a graduated tube

costing thirty cents and a lactometer and cylinder which can be used to obtain the specific gravity of a small amount of fluid. The microscopic examination is useful but much can be done without it.

HERBERT M. RICH.

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## County Society News.

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### ELEVENTH COUNCILOR DISTRICT.

The Eleventh Councilor District medical meeting, held at Big Rapids, Mich., Nov. 2d, 1905, was a big success. More than sixty physicians were present, coming not only from the district but from different parts of the State.

The doors of Mercy Hospital were thrown open to the physicians from 10 a. m. to 1 p. m., and many interesting and instructive cases were witnessed. A pleasant repast was served by the sisters, after which the doctors adjourned to the new and finely equipped operating rooms, where Dr. W. T. Dodge catheterized the ureters of a female patient.

In the afternoon from 1 to 5 the doctors listened to a most interesting and ably presented program, which consisted of a paper on "Intestinal Surgery," by Hal C. Wyman, of Detroit; "Some Cases in Which the Haughey Suture Can Be Used," W. H. Haughey, Battle Creek; "Injury to the Brachial Plexus During Operation for Cancer of the Breast," F. R. Blanchard, Lake View; "The Blood in Relation to Disease From a Scientific Standpoint," by W. P. Gamber, Stanton; "Ectopic Pregnancy, With Notes of a Few Cases,"\* by E. C. Taylor, of Jackson; "Injuries of the Eye-ball, With Report of Cases," L. A. Roller, Grand Rapids; "Contusion of the Hip Joint," by Geo. S. Williams, of Muskegon.

In the evening from 7 to 9 Dr. and Mrs. W. T. Dodge gave a reception to the physicians at their beautiful home on State street.

At 9 o'clock a complimentary banquet at the Northern Hotel was tendered by the Mecosta-Newaygo Medical Society and was a complete success in every particular. After the banquet Dr. David Inglis, of Detroit, gave an excellent address on "The Medical Man and the Commonwealth."

Dr. Victor C. Vaughan, of Ann Arbor, gave a most excellent address on "Tuberculosis and Its Treatment." Prof. W. N. Ferris closed the program with a few remarks.

A. A. SPOOR, Sec'y.

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\*Dr. Taylor's paper arrived too late for publication in this issue, but will appear in the February number.—EDITOR.

## THE BLOOD IN RELATION TO DISEASE FROM A SCIENTIFIC STANDPOINT.

W. P. GAMBER, STANTON.

It is over 250 years since Dr. Harvey put together the glimmer of light which emanated from the learned men during the many preceding years and made the wonderful discovery of the circulation of the blood. He died in 1657, nearly forty years after the discovery had been made, having lived to see his theory generally accepted, and himself honored as a benefactor of his race. Since that time much has been learned about the blood.

In the present day and age of the world a diagnosis in many diseases is not complete without a microscopical examination of the blood, a chemical examination of the stomach contents, a chemical and microscopical examination of the urine, or a microscopical examination of the sputum. Any one of these and sometimes all of them being necessary in order to make a scientific diagnosis. The scope of this paper will be confined to the blood; and, while the subject is a large one, it will suffice to give the more important details, which it is hoped may prove helpful hints to the general practitioner.

The specific gravity of normal blood is about 1.060. Its color is subject to considerable variations, but is generally said to be red. The color depends upon the hemoglobin in the red cells. Hemoglobin belongs to the group of proteids, containing about 96 per cent. of albumen and 4 per cent. of an iron-holding pigment, hemochromogen; and while this union is not definitely understood, it is in such a way as to render the hemoglobin (Hb) comparatively insoluble. When the Hb contains oxygen in excess, as in arterial blood, the combination is called oxyhemoglobin; in venous blood the two co-exist, but Hb is in excess, while in asphyxia the coloring matter is almost entirely Hb.

The proportion of the white blood cells to the red under normal conditions is 1:700, or about 7,000 to 8,000 white cells and 5,000,000 to 5,500,000 red cells in a cubic millimeter. This varies much in many diseases. The white cells in a state of health may be divided as follows:

- (1) Lymphocytes, 22 to 25 per cent.
- (2) Large mononuclear leucocytes, 2 to 4 per cent.
- (3) Polynuclear leucocytes (neutrophile), 70 to 72 per cent.
- (4) Eosinophile leucocytes, 2 to 4 per cent.

As to the formation of red and white cells there are still various opinions, but the weight of evidence at present is as follows: In embryo the

formation of red cells is chiefly in the liver, to a less extent in the spleen, while the bone-marrow, which is less prominent at first, gradually takes up this function and at birth forms the chief seat; and from our present knowledge the bone-marrow in later life is the chief seat of the formation of red cells, but in certain disease conditions the liver and spleen may resume their former rôle in the production of red cells. Under normal conditions the production of leucocytes in adult life is limited to the lymphoid structures, including the lymph nodes, spleen, marrow and hemolymph nodes.

An increase of the leucocytes which is distinctly above normal is called leucocytosis. (When the increase is chiefly the polynuclear leucocytes the condition is called polynuclear leucocytosis or simply leucocytosis. If an increase of the lymphocytes alone, it is termed lymphocytosis; and when several varieties are increased, it is called mixed leucocytosis.) There are three forms of physiological leucocytosis, namely:

- (1) Leucocytosis of digestion.
- (2) Leucocytosis of pregnancy.
- (3) Leucocytosis of the new-born.

After a full meal the number of leucocytes in the healthy person is raised about 33 per cent. It begins in one hour, reaches a maximum in three or four hours, and then begins to decline. The increase is less marked in anemic subjects. If the increase is only slight or fails entirely it is due to a torpid state of stomach and bowels. It is also absent in most cases of carcinoma of the stomach.

During pregnancy it is increased in about the same proportion as in digestion, but after parturition the leucocytes gradually diminish, reaching the normal in about fourteen days.

The leucocytes of the newborn infant are about 100 per cent. above normal, but begin in three or four days to diminish and usually take eight or ten years to become normal. The leucocytosis of digestion and of the newborn is due to lymphocytes, but that of pregnancy is a mixed leucocytosis.

Pathologically we have leucocytosis following acute hemorrhages, the various forms of anemia, antemortem when dissolution is slow, and that due to inflammatory conditions. Pathological leucocytosis results nearly always from an increase of the polynuclear leucocytes.

"It is now apparent that leucocytosis represents Nature's attempt to rid the blood and the system, by means of leucocytes and their products, of the bacterial and toxic causes of disease." (Ewing.)

The leucocytes are the "standing army of the living organism" and when necessary to combat



any disease condition or inflammatory process, they increase in number according to the requirements of the case. These white cells of the blood are always watching for these tiny enemies, like a cat hunting mice, and when they find them they at once try to kill them. In the battle against these disease germs many of the leucocytes get killed, and the resulting matter is called pus. When this pus is found in a cut, the laity say they have caught cold in it. If we become exposed, get our feet wet, and the cold air blows on our heads and lowers the vitality of the epithelial cells of the nasal mucous membrane we get a "cold in the head." The leucocytes at once gather around the spot, while the capillaries pour out more food for the cells. During this process some serum and many of the leucocytes pass through the delicate membrane, and we find ourselves in the condition the little boy was when he was commanded to blow his nose, when he replied that he did blow it, but it would not stay blown.

This process by which bacteria are englobed and digested by the leucocytes, through their amoeboid movement constitutes phagocytosis, and in this process the polynucleated cell are the most active. In an experiment by the writer, in which a sterile culture of the anthrax bacilli was injected under the skin along the spine of a frog, and several hours after some of the exuded material properly stained and examined under the microscope, many ingested anthrax bacilli partially destroyed could be seen, and the frog seemed no worse for the operation. Some of the same culture was injected under the skin of a rabbit, which died from the effects in twenty-seven hours, and the blood was swarming with anthrax bacilli; and, while the leucocytes destroyed many bacilli, they were overpowered in the end.

In the pathology of the blood, we will confine ourselves mainly to the more important diseases in which the blood is affected. Ewing says: "In no other disease do the red cells suffer destruction so constantly and to such an extent as in the toxemia of diffuse inflammation caused by the common pyogenic bacteria." Hayem and Toenissen placed the average loss of the red cells in ordinary septic fever at 200,000 to 1,000,000 per week, while a continuous diminution was found to persist as long as suppuration continued. "Various forms of septicemia not infrequently reduce the red cells below 2,000,000, but none appear to act more violently than does puerperal or uterine sepsis." (Ewing.) The Hb is also reduced as low as 20 per cent. in these cases. Appendicitis also comes in for a proportionate loss in these two elements, depending on the severity. The increase of leucocytes varies from a slight increase

in exudative cases, to 40,000 or 50,000 in cases with severe general infection. Dr. Ochsner, of Chicago, was asked at our State Medical meeting in Grand Rapids if he depended upon the blood-count in his operations for appendicitis. He replied that they made a blood-count in all acute cases, but did not rely upon this as their main guide in operating. If the blood-count shows 30,000 or more leucocytes it is evidence that there is considerable active disturbance, although Cabot reports a case with 33,000 white cells which recovered without interference. But on the other hand, if you find a case of appendicitis or puerperal sepsis where there are 30,000 or more white cells to the cubic milimetre followed by a rapid decline of the leucocytes to normal or less with other severe general symptoms, it is evidence of the failure of the system in the production of white cells, which are being overcome by the increasing numbers of bacteria. In such a case look for rapid dissolution.

In fevers there is more or less leucocytosis, largely depending on the amount of fever, but it is more marked in pneumonia, diphtheria and scarlet fever, severe cases showing from 40,000 to 50,000. In all the fevers there is in the later stages a diminution of the Hb and also of the red cells, with resulting anemia, but in pneumonia, diphtheria and typhoid fever there may be polycythemia (increase of the red cells) during the earlier stages due to concentration of the blood. In all or nearly all cases of pneumonia there is an excess of fibrin in the blood which increases its coagulability, with an accompanying loss of chlorides, principally chloride of sodium which must be supplied medicinally. In diphtheria the use of antitoxin by limiting the progress of the infection, tends to prevent further destruction of blood-cells. Within half an hour after the injection of antitoxin, the leucocytes, especially the polynuclear forms, if previously abundant, show a marked diminution, and in most cases, although the leucocytosis returns after 24 or 48 hours, it seldom reaches its previous grade. In tuberculosis there is generally a loss of red cells and of Hb, and where there is a mucopurulent expectoration, some increase of leucocytes. Ewing says: "In phthisis, as well as in other tuberculous processes, great caution must be used in judging of the patient's improvement from an increase in red cells or Hb," and says that he has seen the Hb and red cells increase while the patient was rapidly losing flesh, the lesions advancing, and the total quantity of blood doubtless falling.

In chlorosis there is a primary anemia which occurs almost exclusively in young women after the establishment of menstruation. This results



from a defective hematogenesis which affects principally the Hb, but, secondarily the red cells are also diminished. On an average the Hb is reduced from 35 to 45 per cent., with cases reaching as low as 20 per cent, and with the loss of Hb there is a corresponding reduction in the specific gravity. As the chief alteration in the blood is the loss of Hb, the Hb-index is one of the diagnostic features of the disease. Secondarily there is a loss of red cells, and in cases of average severity the red cells run from 3,500,000 to 4,000,000, while exceptional examples show less than 2,000,000 red cells. A high count of red cells is a favorable prognostic sign. The average case of chlorosis shows no abnormal variation in numbers or production of the leucocytes, but as the case continues to grow in severity there is a progressive diminution.

Progressive pernicious anemia is a disease of the blood resulting from defective hematogenesis, peculiar morphological changes in the red cells, and by characteristic changes in the bone-marrow. The specific gravity of the blood is constantly reduced, owing to the loss of both albumens of the plasma and the Hb of the red cells. The average case registers between 20 and 40 per cent. of Hb, while it varies from 10 to 70 per cent. When the disease is well established, the red cells vary slightly above or below 1,000,000. Megaloblasts (enlarged red cells) form about 90 per cent. of the red cells, measuring from 11 to 16 micro-millimetres in diameter, while normally they are 9 m. m. "It may be said that unless 33 per cent. of the red cells are distinctly oversized, the diagnosis of pernicious anemia should be made with reserve." (Ewing.) Nucleated red cells called normoblasts may be said to occur in all cases of pernicious anemia, but they vary greatly and sometimes are hard to find. They usually increase with the severity of the blood changes. The leucocytes in well established cases are markedly reduced in number with a relative increase of the lymphocytes. As to etiology, it is of idiopathic origin.

#### LEUKEMIA.

There are two forms of leukemia, namely: myelogenous and lymphatic. In the average chronic case of leukemia the red cells are usually reduced to 2,000,000 or 3,000,000, with a variation from 1,000,000 to 5,000,000. The per cent. of Hb is about 50 to 60. The leucocytes in moderately severe cases are from 100,000 to 200,000, with an average of 138,000. There may be 1,000,000. In the myelogenous form the myelocytes, which are mononuclear leucocytes with neutrophile or with eosinophile granules, are increased from 20 to 60 per cent. In the

lymphatic form the excessive leucocytosis is made up chiefly by the lymphocytes which constitute 85 to 95 per cent. of the white cells. The swelling of the lymph nodes is one of the first noticeable symptoms, having preceded all other signs for some months in some lymphatic cases. The enlargement of liver and spleen occurs in both variety of cases.

Pseudoleukemia is a primary disease of the lymph nodes and lymphatic structures, characterized by progressive enlargement of various chains of lymph nodes, and by secondary multiple growths of lymphoid tissue throughout the lymphatic system. It is of toxic and usually of infectious origin. The spleen is always enlarged, usually to a very considerable size. The red cells often number 5,000,000 or more when the lymph nodes are distinctly swollen, but in some cases the number falls below 3,000,000. The Hb is diminished in all cases, and is usually lower in the earlier stages with slight diminution of red cells than in later stages with marked reduction of red cells. In most cases the leucocytes are normal or diminished in number, with a tendency to relative lymphocytosis. In the more acute cases with fever the leucocytosis may be considerable, but does not pass beyond the limit of inflammatory leucocytosis, 50,000 or 60,000.

We can not leave this subject without giving you a few words on malaria. Of the two kinds of mosquitoes, the culex and the anopheles, the latter is the carrier of the malarial organism. It is now a settled question that the malarial organism is carried from the malarial patient to the healthy individual through the medium of the mosquito by first sucking blood from the former and afterward biting and leaving some of the lymph containing some of the malarial parasites upon the latter. These parasites attack the red blood cells of the blood, and the patient likewise becomes affected with malaria. (As these mosquitoes live in low and marshy places and do their biting only after sunset and before sunrise, the inhabitants in these places may keep free from malaria, if they will remain in mosquito proof houses during the night.) There are few conditions which lead to such extreme destruction of the red cells so rapidly as does acute malarial infection. Such attacks may reduce the red cells in a few weeks time to less than 1,000,000. Such attacks in robust subjects may show a loss of 1,000,000 red cells on the first day and a loss of 2,000,000 during the first four days. In neglected chronic cases of malaria the red cells may be reduced to 2,000,000 or less, and is in danger of leading to pernicious anemia. The Hb is less affected, and the Hb-index may be increased.

There is very little change in the leucocytes, and the absence of leucocytosis with a rapidly arising temperature may be found of much value in the diagnosis of malarial fever. Ewing says: "By far the readiest method of determining the presence of malarial infection is by the examination of the blood." In the southern states, where they have so much malaria, the leading physicians do not pretend to make a diagnosis of malaria without first making a microscopic examination of the blood, unless they are of the simple tertian or quartan type, but if they are of a mixed type or of the estivo-autumnal type a blood examination is necessary. Quinine seems to have a more destructive effect on the malarial parasite in the peripheral blood, so that an examination of the blood after administration of quinine may be negative. If a solution of quinine 1:1500 is mixed with blood under a cover-glass, it is seen that most parasites soon cease their ameboid movements. (Most of the parasites contract and remain motionless, but, according to Monacho and Panichi, the half-grown parasite often leaves the red cell, and are englobed by phagocytes, while the younger and older forms do not emigrate, and may show ameboid movements.) Experience connected with these facts proves the inefficacy of quinine in any other than the apyretic stage. Time and space will not permit a description in detail of the morphological changes in the parasite in this paper, but briefly for instance in the tertian variety, the young parasite enters the red cell. In forty-eight hours this one has developed into twelve to twenty new parasites when division or sporulation takes place, and the malarial organisms are again set free in the blood. It is at this time that the chill and fever takes place, and the only time, while the parasites are still free in the blood and before they enter the red cells that the antiperiodic has any very material effect upon the malarial parasite; and in order to get full effect you must precede the chill and fever with the administration of quinine, 15 grs., about four hours. In the estivo-autumnal type use 5 grs. every hour for four doses, then 5 grs. every four hours.

#### EXAMINATION OF THE BLOOD.

In making this examination it is best to get specimen of blood to make blood-count, Hb test, and blood smear all at one operation. The finger is commonly recommended as the site for obtaining the blood, but the writer, as do many others, prefers taking it from lobe of ear. First cleanse lobe of ear with soap and water or with a mixture of alcohol and ether and wipe dry. A spear pointed needle or Graefe's narrow cataract knife may be used. Hold lobe of ear firmly between

thumb and finger, and puncture to a depth of one-eighth to one-fourth of an inch. After the puncture do not squeeze only enough to start the flow or blood. As it is important not to use the first few drops in making the blood-count, these can be used for blood-smear and getting per cent. of Hb. The most simple method of getting the per cent. of Hb is that known as the Tallqvist Hemoglobin Scale. The filtering paper is held so that a portion becomes saturated. At this stage of the operation you lay aside the filter paper for a few minutes until you have made blood smear and filled the pipette for the blood-count. By this time the blood stain will have lost its humid gloss. You then compare with scale found in back of book. 90 to 100 is normal.

#### USE OF THE HEMATOCYTOMETER.

The pipette for the red cells is first used and the blood carefully sucked up to 0.5 mark. Wipe blood from pipette and insert tip in diluting fluid and suck same up to 101 mark. This dilution will be 1:200. If a dilution of 1:100 is wanted you fill pipette with blood to mark 1. Now close the ends of pipette with finger and thumb and agitate so as to mix thoroughly. After blowing out a few drops the next drop is placed upon counting slide. The cover glass is carefully put over the drop. The space between the counting chamber and cover glass is one-tenth milimetre in thickness. Slide and cover glass must be thoroughly clean and dry. The mixture must not be allowed to get over the trench, and there get under the cover glass; if it does, a second drop must be tried. There are various dilution fluids, but the following is the most generally used, and is known as Toisson's solution:

R Methyl violet 5B, .25 grms.  
Sodium chloride, 1.00 grms.  
Sodium sulphate, 8.00 grms.  
Pure glycerine, 30.00 grms.  
Distilled water, 160.00 grms.

This fluid keeps well, stains the leucocytes, and is of high specific gravity, so that the red cells settle slowly. After eight or ten minutes you proceed to make the count. The thickness of the cover glass prevents using a high power objective. A half inch objective with one inch eyepiece is very satisfactory.

In counting the leucocytes, proceed in the same manner to fill the white cell pipette, but for the diluting fluid use a 3 per cent. solution of acetic acid, which makes the red cells invisible. When the pipette is filled to 0.5 mark the dilution is 1:20, and when filled with blood to 1 mark the dilution is 1:10. The counting of leucocytes is sometimes taken from the same preparation as the red; their bluish stain makes it possible to



pick them out readily. It saves time, and with the latest improved counting slides with Turck's or Zappert-Ewing modification, the result is very satisfactory, as it gives nine square millimetres of surface to count over.

In preparing the blood smear two or more slides are necessary. One of these is held between the thumb and finger, and touching the blood with the end of it, is then placed at an acute angle on one of the other slides, and gently drawn lengthwise on same. As many as desired can be made, and allow these to dry in the air.

Our method of staining is that used by Prof. Oertel in the laboratory of the Medical Department of the University of Georgia.

First: Fix blood by immersing four minutes in the following solution:

40 per cent. solution Formaldehyde,  
2 to 4 gtt.

95 per cent. alcohol, 5iiss.

Second: Stain for 15 seconds in the following solution:

Eosin, gr. i.

95 per cent. alcohol, 3ij.

Third: Stain in Goldhorn's Polychromic Methylene Blue for one to two minutes. Always wash under hydrant after each stain, and lastly dry in air without blotter, and examine with one-twelfth inch oil-immersion objective. It is in these stained blood smears that you are to look for the malarial parasite, abnormal and characteristic leucocytes and red cells, on which the diagnosis of some diseases depend. It also gives a fair estimate of the Hb by showing more or less of the center of red cells a lighter color.

#### THERAPEUTIC MEASURES.

The iron of the blood is principally found in the hemoglobin, a compound of albumen and iron containing, in human blood, about 0.42 per cent. of iron. The percentage of iron in normal blood is placed by Limbeck between .056 and .058. Ewing says: "The remarkable effect of this agent upon the blood in suitable cases of anemia is seen in a rapid increase in the number of red cells, and in a later but rather more uniform increase of Hb." A difference is found in the effects of small and of large doses of iron. When small doses are given the red cells outstrip the Hb, but with large doses both increase in equal proportion. It is also found in some cases that the red cells diminish for a few days when beginning the administration of iron, and then begin to increase.

#### INDICATIONS FOR THE USE OF IRON.

Ewing says: "The specific effect of this drug being centered primarily on the Hb, the chief indications for its use and the best results are ob-

tained in cases of pure chlorosis, with marked loss of Hb and moderate reduction in red cells. In secondary anemia its curative action is less certain. With the appearance of larger cells with normal or increased Hb, the use of iron becomes much less effective, and when the Hb-index is above normal, it seems to be entirely valueless." Improved hygienic and dietetic conditions aid the use of iron very much. The influence of baths, oxygen and massage are powerful adjuncts in the treatment of anemia.

The diminished barometric pressure is a most important factor in altitude, in which we get an increase in size of the peripheral vessels which brings to the surface more blood to be exposed to the sunlight and air; thus increasing oxidation and nutrition. This also shows an increase of red cells, which is in part due to simple concentration of the blood. With this increase of blood to the surface and a greater amount of sunshine in these places to increase the Hb, it gives to the blood a greater power to absorb oxygen. Elevations of 4,000 feet or more are contraindicated in anemic cases with valvular lesions of the heart. Residence at the sea-coast is frequently followed by increase in the number of red cells as a part of improvement in general health.

"While iron is contraindicated by the appearance in the blood of megalocytes (enlarged red cells) with increased Hb, under these circumstances arsenic frequently exerts an almost specific effect in increasing the number of red cells, and in stimulating the production and more uniform distribution of Hb." (Ewing.)

In the simpler forms of anemia, as well as in the severe and chronic forms, the effects of the iron is often accelerated by the combination with arsenic.

Leukemia and pseudoleukemia have received benefit with some apparent cures from the X-ray treatment.

There are a few substances, the so-called "blood-poisons" which tend to destroy the red cells, and when given in lethal doses they destroy life by converting the hemoglobin into met-hemoglobin, a substance which is insoluble in water, giving to the blood a chocolate color, and the red cells proportionately lose their power to discharge carbonic acid and carry oxygen. These substances are chlorate of potash, pyrogalic acid, phosphorous, toad-stools, and the poisons of many infectious diseases.

After hemorrhages the blood is rapidly renewed. The blood constitutes about 7.7 per cent. of the weight of the body, and it is estimated that a hemorrhage in which no more than 3 per cent.



of the weight of the body, or 40 per cent. of total amount of blood, is lost, will not prove fatal; and that the plasma will be renewed in such cases within forty-eight hours, although it may require weeks for the renewal of the red cells. In severe cases, whether the depletion of the blood is due to hemorrhage or other causes, the treatment is the transfusion of salt solution, 7:1000. The rationale of this is stated by Howell to be that in normal blood; the number of red corpuscles is greater than that necessary for a barely sufficient supply of oxygen, and that if after a hemorrhage the quantity of fluid in the vessels is decreased, the circulation is made more rapid, and the remaining corpuscles are made more effective as oxygen carriers; this office is made still more effective by keeping the corpuscles from becoming stagnant in the capillary areas. While the regeneration of the blood is more rapid after the salt infusion, yet this procedure must be regarded as of more value as a means of saving life than as a stimulant to blood formation.

#### REMARKS ON 'INTESTINAL SURGERY, EPILEPSY, TYPHOID PERFORA- TION, ETC.

HAL C. WYMAN, DETROIT.

The subject which I have been courageous enough to put before you to-day is "Intestinal Surgery," and we realize there are some limitations to intestinal surgery. We realize that the layman criticises our lack of industry in certain directions and that we are indulging ourselves in much talk and little doing. In the vast literature of our art there are "men deeply versed in books, but shallow in themselves." We have a great deal to do to reduce the mortality in intestinal surgery. It is too large, because operations are performed too late. We think frequently of the mechanical effects of shortening the alimentary canal and lessening the amount of surface exposed to intestinal toxins, but we are not likely to shorten it much above the point where the bile ducts and pancreas open. We are ignorant of some features of intestinal anatomy. I do not think I am far out of the way when I say that if a number of us made an autopsy to-day, and were asked to find where the duodenum leaves off and the jejunum begins, I think we would be completely lost. It is not an easy thing to find. There is a good portion of the duodenum that is so deeply seated that we do not always see all of it. It is frequently the seat of ulcerations. The Mayos speak of ulcers of the duodenum. They have done a great deal to draw our attention to that organ.

There is still a great deal of work to do. Not only is it a frequent seat of ulceration (parasitism.) If I may be permitted to discuss a very learned paper on anæmia I should caution against following too closely the quantity of blood cells and their relation to each other, if I expected to cure my patient. If you look into the duodenum in many of those so-called cases of pernicious anemia you will be surprised to find how many times you will find ulcers and the hook worm (*ankylostoma duodenale*). I might say that my attention personally was drawn to this part of the subject by some cases of pernicious anemia in the island of Ceylon. A number of bodies, grave, emaciated and anemic, at the post-mortem showed in the duodenum that it was studded with little ulcer-like surfaces, and a good many of the pernicious anemias are due to that condition. There is in this duodenum at this particular point a marked disposition to stasis. If you will examine a point in the meso-colon where the duodenum passes through it you will find that there are muscular fibers there in considerable numbers, and they induce spasm of outlet of duodenum. Hernias may occur in the retroperitoneal space through the mesocolic opening for the duodenum.

The opening indicated is rich in muscle fibers and frequently is the seat of spasm and I think a great deal of constitutional disturbance grows out of this. Stagnation of the stomach contents may follow along the stagnation of the biliary products and the duodenal contents in consequence of spasm of the outlet of the duodenum, and in some cases this is the cause of epilepsy. The operations which have been performed for these purposes have been successful. In one case of epilepsy operated on a few weeks ago the patient had been suffering from these attacks almost daily. There was a marked region of tenderness over the duodenum, eructions of gas, and indication of the distension of the stomach in consequence of the pyloric obstruction which did not exist. The duodenum was almost as large again as it should be and I had no hesitation in performing the operation I just mentioned.

Spasm exists just as commonly in the duodenum as it may in any other sphincter of the body. Now in criticism of this I understand, of course, that we all know that almost any operation may temporarily do something to the body which arrests the progress of epilepsy, so I would not want to claim that this little procedure should be looked forward to as a surgical panacea for epilepsy, but I do believe that I have had opportunity for reasonable foundation for that as-

sumption that this outlet of the duodenum is not infrequently the seat of obstruction which leads to stagnation and duodenal paresis. Now just beyond this point in the jejunum we have a portion of the bowel which is frequently resorted to for the purpose of cutting short the alimentary canal, gastro-enterostomy. We consequently open this meso-colon and grasp the stomach above and drag it out through like that (demonstration), and then catch up this portion of the jejunum and make a slit in it and so perform a gastro-jejunosomy. You can tell that part of the intestines by the valvular conniventes. Do not select a point for operation too far from the jejunum. The intestinal stream will be continuous between the cavity of the stomach and duodenum, and the closer you get the jejunum up to your stomach the better it would be and consequently you want to be pretty sure you are not too far down the stream. You may perform this operation by the simple process of suture or you may resort to the mechanical devices made for that purpose. Every man should practice on the lower animals until he acquires a practical deftness in the touch. The experienced, I believe, generally are averse to the use of the devices, notwithstanding the great value of the Murphy button. I like the suture best.

I want to just drop that matter for a moment and proceed to another phase of the discussion and that is typhoid fever in its relation to intestinal surgery. If we proceed to a close anatomical study of the disease we find that the typhoid manifestations are in the lower three feet of the small intestines. We find these ulcerations bearing such a relation to the mortality of the typhoid that practically one-fourth of all the deaths are the result of perforation—a direct result of these ulcerative processes. We find that suturing these perforations saves fully one-fourth of all the cases that it embraces. About one-fourth are saved by the endeavors that are made today. In our desire to do something for the man and at the same time to combat a certain pathologic condition of the disease, we put too much study on the chart and not enough on the hand. If you learn to apply the hand in the anatomical sense you learn very soon to pick out the three lower feet of the ileum, and picking that ulcerated area out quickly develop the skill and courage essential to opening that region and increase very much the recoveries in these cases of ulcerations, by surgical means. There are very few men doing this work today, and that is for the reason that the study of typhoid fever today is a study of the chart. You cannot get into surgical touch of

typhoid unless you put your hands in these. I think it is a field well worth while. As to dealing with a case of perforation the patient is extremely mute. A few whiffs of the anæsthetic will change the aspect of it. There is no ground for fear from a reasonable operation under these circumstances. Cases of respiration, in default, with pulse of 140, with tenderness and distension, with hard, sharp pain and the indications of impending collapse will be benefited by this anæsthesia. If there happens to be much escape of the intestinal contents introduce a drain after the closure of the opening, and if you find that Nature has already made some efforts to close up and protect the body against this perforation you need not disturb what Nature has done. If you find intestinal contents escaping lay in a piece of gauze or two and dress. The poison gets out quicker, the ulceration process heals more rapidly, the tension is taken off and the ulcer heals sooner. Frequently the opening is small. You find only a mere spot of lymph and a simple suture of two or three turns around the opening and you have it closed.

Now one thing more. I believe, to emphasize what I have already said, we should lay aside the chart and use it merely as a secondary measure and cultivate the sense of touch in the ulcerated or infected region. The relations of the intestines to some of the infirmities which carry off our little ones—intussusception of the bowels. It is common. You will be astounded how it is covered up and masked. Blood-cells, a little mucus, a little slime, and so quickly following is collapse and the disappearance of the child. If again you bring this sense of touch in play and train your hands to know the contents of the abdomen in the child you will feel a sausage-like lump—you feel something around in there that does not exist on the other side. The gas would not come through the bowel. The physic might have worked a little too much. You will see evidence of an obstruction if your deductions are based on touch. If you find an intussusception there is only one remedy. I believe that you can sometimes work those things loose. If you reverse the child, the head depending, you put your hand well up the abdomen in the search for the continuity of the intestines to feel the point where the ileum joins the caecum, I believe sometimes the manipulation may so change the vermicular movements of the intestine that the intussusception relaxes and the contents of the bowel goes through and the case is on the road to recovery. I believe that if we study in this direction we will find a good many of them. When we find an obstruction I do not think it is



necessary to make much disturbance over the matter. Search the ileo-caecal opening and sigmoid for the conditions I have mentioned. You can bring the point of the intestine close to the point of the intussusception in contact with the loop of intestine just below and you can make a lateral anastomosis by making a slit in each and restoring the intestinal stream. But first of all the intestinal stream must be restored. Sometimes you can follow them out. As a rule the cases that I have met with have been jammed in good and tight. Injection of oil or inversion of the body had been resorted to without avail.

There are other ulcerations affecting the intestines. Tuberculosis does not neglect the intestine, and we not infrequently find it the seat of disease. In dysentery and tuberculosis the colon and small intestines are the seat of ulcerations. There are two ways in which surgery may approach these matters. One is by an incision such as you would make in a case of appendicitis. Cut a hole in the caecum and clean out the contents. By use of your hand work out the contents. Wash out, but not with iodine or silver nitrate or intestinal antiseptics. Let the contents of the bowel run out through this artificial anus. It is a simple, temporary device; it is a surgical working hypothesis. The parts are given rest so that the ulcerative process may heal. Then you may open the abdomen in the middle line in these cases. That is characterized by blood and filthy stools—the chronic diarrhoeas. Old army diarrhoeas are not infrequently tubercular. You may open the median line and run the loops across and you will find tuberculosis. You will recognize a tenderness and change in color. Open in that way and paint with silver nitrate, and suturing the intestine is the other method. Gentlemen, I thank you very much for your attention.

#### INJURIES OF THE EYE-BALL, WITH REPORT OF CASES.

L. A. ROLLER, GRAND RAPIDS.

My object in presenting this subject to you is the fact that the general practitioner is very frequently called upon to treat these cases and is not always able to call to his aid the assistance of an eye specialist, especially in the smaller towns. While I shall not be able to bring out any new theories or advance any new methods of treatment, I shall endeavor to emphasize certain facts which may be of use to you in dealing with these cases.

The subject of injuries to the eye-ball is such an extensive one and the sources of injury so many, that it would be impossible to go into this

subject in detail, so that I shall confine my remarks more particularly to injuries of the cornea and deeper structures, and such injuries that are more likely to set up sympathetic ophthalmia in the other eye. In the first place, injuries of all descriptions should be carefully examined when first seen, to ascertain their extent and character. These wounds of the cornea may vary in extent from a superficial defect of epithelium to a perforating cut, which traverses the entire thickness of the membrane. Septic infection is very frequent and prolapse of iris or vitreous into the wound are not unfrequent complications, even slight injuries inflicted with unclean instruments, may be followed by a corneal ulcer or by abscess, with danger of sloughing and of pan-ophthalmitis. The cases in which the traumatic agent penetrates into the vitreous, carrying septic matter with it, are especially unfavorable, and generally end in intraocular suppuration.

Wounds of the sclero-corneal margin are dangerous on account of injury to the ciliary body, and because of the frequency of complications with prolapse and consequent sympathetic irritation or inflammation. Injury to the eye with retention of the foreign body is of great importance because of its frequent occurrence and of the severe inflammation which is likely to follow, and of the danger to the other eye, unless scientifically and properly treated; and right here I am reminded of a young man who came to me several years ago with a history of having received an injury to his left eye by the explosion of a bottle containing powder, to which he applied a lighted match while celebrating July 4th. At the time I saw him, Oct. 15th, he could see nothing with the injured eye and with the other could count fingers at one foot.

The injured eye was not painful nor inflamed, and showed a scar the entire length of the cornea. The good eye was red, painful, and vision was gradually failing, and he had all the symptoms of an irido-cyclitis, and still his doctor told him there was no need of him consulting an oculist as he could do as well. The good eye had been paining him for about six weeks when I saw him. I enucleated the injured eye at once, hoping to save what vision remained, and when he left the hospital two weeks later vision had improved sufficiently to enable him to count fingers at ten feet, and later to perform usual manual labor. If this young man's eye had been enucleated earlier, he would, no doubt, have had better vision. Of course, it is proper in many cases to try and save an eye, if you can do so without endangering its fellow, and especially if the patient is under your observation, but as soon as sym-



pathetic trouble has started enucleate at once. You may even then be powerless to stop the loss of the sympathizing eye.

In cases where there is a retention of a foreign body, if the foreign body cannot be removed without sacrificing the eye, I believe the eye should be removed, especially if vision is lost, as it is always a source of anxiety on the part of the patient and physician.

I have recently had a case which gave me a great deal of anxiety and in which I hardly expected to get sympathetic ophthalmia, but did, and which changed my views somewhat in trying to save these badly injured eyes.

The history of this case in brief is as follows: About seven months ago I was called to the hospital to see a young man who had been badly burned by the explosion of an oil can while lighting a fire, by pouring oil out of a can on some live coals.

He had been injured several weeks before I saw him, and the attending physician was looking after his eyes, as well as his other burns. The young man's body, hands, ears and face were badly burned, as was also one eye. At the time I saw him the outer layers of the cornea had sloughed from ulceration and there was pus in the anterior chamber. The other eye was normal. The parents were very much opposed to enucleation, and I thought the eye-ball could be saved without danger to the other eye. I made an incision through the lower part of the cornea, evacuated the pus, washed the eye with bichloride solution, put on bandages, and had the eye dressed twice a day afterwards. In about three weeks, when he went home, the wound and ulceration had all healed, and he had quite a respectable looking eye. There was, however, some slight redness.

We were congratulating ourselves on having saved such a good looking eye. In about six or seven weeks the young man came to my office complaining of the good eye. He said it had been painful for about three or four days. I found the eye red, painful, vision defective, and quite marked photo-phobia. I advised enucleating the diseased eye at once, in hopes of arresting the mischief in the good eye.

After some little delay the parents gave their consent and the eye was enucleated. This did not seem to arrest the progress of the disease, but by the use of hot applications, calomel and atropine, the vision now with correction is 20/50.

CASE 1.—May 21, 1898, Mr. R. L., of Nunica, a farmer by occupation, consulted me for failing vision in his right eye. He gave the following history: Five or six months previous while cut-

ting brush he was struck in the eye by a limb of a thorn-apple tree.

The eye was painful and inflamed for a number of days, he did not remember just how long. After the inflammation had subsided he noticed that the sight was nearly gone in that eye. The vision in the right eye was all right until three weeks before he consulted me. He then noticed that the vision in this eye was failing, the eye watered and was weak, very little pain and slight redness. At the time he consulted me vision in the left eye—counted fingers at two feet. Vision in the right eye 20/50.

No improvement with glasses. Ophthalmoscopic examination of the left or injured eye showed on upper portion of the lens or lens capsule a dark pointed object about 1/16 to 1/8 inch in length, which taken from the history of the case I judged to be the point of a thorn, which had broken off in the eye, media hazy, though lens seemed clear.

I gave the patient my opinion and advised him to consult another oculist.

He then saw Dr. Welsh, who concurred in my diagnosis. I explained to the patient that the foreign body in the left eye was setting up sympathetic irritation in the right eye, and that if we could remove the foreign substance we could probably retain what vision was left in the right eye, and that it might come back to normal. I also told him that if we failed to remove the substance it might be necessary to remove the injured eye.

He said he was perfectly willing to do what I thought best, if he could save the one eye.

He was taken to the hospital, the eye prepared in the usual way, and with the assistance of Dr. Welsh I made an incision in the cornea and with a pair of fine tooth forceps attempted to grasp the foreign body. As it was impossible to see the object without the ophthalmoscope, I soon found that it was impossible to remove it in this way. I then enlarged my incision and removed the lens, which was soft, but did not see the piece of thorn.

The eye was then thoroughly washed with antiseptics, bandages applied and the patient put to bed. I concluded not to enucleate at this time but wait developments. There was considerable reaction and the patient remained at the hospital about three weeks; at this time the eye was improved sufficiently so that the patient came to my office for treatment. After he had been coming to my office for a few days I noticed this dark object near the entrance of the corneal incision. It had become caught near the incision. I reopened my former incision and with the for-

ceps grasped the substance, which proved to be the point of the thorn, about one-sixteenth of an inch, and gave it to the patient, who expressed a desire to preserve it. After its removal the eye improved rapidly, and vision in the right eye became normal.

I saw him nearly a year afterwards and he had no further trouble.

CASE 2.—Dec. 24, 1891, Mr. G. L. K., a laborer in the employ of the Valley City Ice Co., came to my office with an extensive lacerated wound of the cornea. In attempting to catch hold of a block of ice, his ice-thongs slipped and the point of the thong pierced the eye-ball, cutting through the lower fifth of the cornea and extending through the ciliary region on both sides. There was a prolapse of iris and the eye was collapsed. I hesitated whether to enucleate or make an attempt to save the eye. I concluded to do the latter. The eye was thoroughly washed with antiseptics, the prolapsed iris snipped off and with two or three fine stitches the wound was closed. Bandages were applied and the patient sent home, with directions to apply ice cloths. There was a low form of irido-cyclitis, but so slight that the patient suffered but very little pain and went to work in about six or seven weeks, the eye being well. He is now at work for the Consumers' Ice Co., and has a good looking eye with an almost imperceptible scar, of course; the pupil is large, as so much of the iris was removed.

He has only light perception, but the eye is much better than an artificial one. I gave him instructions that if the other eye ever showed any signs of sympathetic irritation, he must consult an oculist at once.

CASE 3.—Sept. 12, 1900, C. W. O., a laborer of the Halladay Lumber Co., came to my office complaining that about an hour before, while at his work, he had been struck in the right eye by a block of wood about one and one-half inches long, which struck the saw and flew back about four feet, striking him on the upper lid, and that he was only able to see light. Upon examination I found the anterior chamber filled with blood and the iris torn loose at the upper ciliary margin, a little to the nasal side. The separation was about one-eighth of an inch. Atropine was instilled in the eye and he was directed to apply ice compresses. The atropine being used so soon after the injury had the effect of drawing the iris back into place, and the pupil kept well dilated until reattachment had occurred. The blood absorbed in a few days and vision returned to normal. This case is interesting as reattachments of the iris to the ciliary body rarely occur.

I have had several cases of iridodialysis and

this is the only one in which reattachmen has occurred. In this case separation was not great. Berry mentions such a favorable result from the records of the Dublin Eye Hospital. Gruening also mentions a favorable result at Mount Sinai Hospital.

The question as to whether it is best to try and save a badly injured eye or enucleate at once, is often a trying one.

The patient, as well as his friends, are very much opposed to having an eye removed, if it is possible to save it, even though it may not look as well as an artificial one, and a physician often yields to their pleadings—contrary to his better judgment.

Enucleation of the injured eye is the only remedy for sympathetic ophthalmia, and is reliable only as a prophylactic measure before the other eye is involved.

In all cases of severe injury with or without retention of a foreign body, our treatment should be guided by the cardinal principle of preserving as long as possible, first the function of the eye; second, its form; and of deferring enucleation until we are obliged to remove the globe on account of progressive inflammation, or danger of sympathetic ophthalmia.

The indication for enucleation is not always clear, but I think we can judge a good deal from the condition of the injured eye. Sympathetic inflammation does not usually develop unless we have a picture of irido-cyclitis, or an infection of the deeper structure of the eye. If the iritis is progressive, eye-ball painful, sight rapidly diminishing vitreous hazy and fundus indistinct, I urge enucleation. If the injured eye is blind and not yet free from irritation when sympathetic ophthalmia affects the other, we should enucleate the former, for it is conceivable that the injured eye, as it did at first, may continue to induce a morbid process in the other.

Penetrating wounds are as a rule the kind of injuries which give rise to this disease. Such wounds are nearly always associated with loss of aqueous or vitreous and with intra-ocular hemorrhages. A very common and dangerous site, for an injury, is the ciliary region.

Mackenzie thinks that the disease is more apt to be excited if the wound has produced a protrusion of the iris and such a cicatrix of the cornea and sclera, as keeps the portion of the iris which had not protruded perpetually on the stretch.

I believe in conservative surgery about the eye, as well as other parts of the body, and have saved eyes that were badly injured. But I have come to the conclusion that it is better to remove



an eye at once, that is severely injured, than to run risk of sympathetic disease in the other eye. While sympathetic disease is not frequent, you never know when it is going to occur, and when you have seen a few patients go nearly blind because of a retained injured eye, you feel as if the only means of safety and security lies in an early removal of the offending organ.

If sympathetic inflammation has actually arisen, enucleation will not always check the destructive process; so the only safe plan, it seems to me, is to advise operative procedure, in these cases, and if it is refused either give up the case or let the patient stand the responsibility.

#### REPORT OF CASE OF INJURY TO BRACHIAL PLEXUS DURING OPERATION FOR CANCER OF BREAST.

F. R. BLANCHARD, LAKEVIEW.

Mr. President and Gentlemen of the Society—My object in reporting this case is not so much to show what a blunder I made in operating as to relate the wonderful efforts of Nature to repair the damage. On April 2d, 1904, I was called to see Mrs. S. I found her walking the floor, suffering intense pain. Without waiting to get a history of the case I administered  $\frac{1}{8}$  grain morphine, hypodermically, and in about one-half hour the patient, being comfortable, I obtained the following facts: Patient 48 years of age. About Christmas, 1903, she noticed a lump under the skin between the left breast and axilla; it was very hard and painful to the touch. In a few weeks two more lumps appeared in the axilla. All three growths gradually increased in size, and at times were very painful. The severe pain which she was suffering upon my arrival was in this region. Patient's family history good. Personal history: Patient had always been well, and had worked very hard, weaving carpet, besides doing the housework for the family; had four children, the youngest 10 years of age; a number of miscarriages, which had been produced. Upon examination I found a hard growth about size of hickory nut midway between the upper edge of the breast and the axilla; also two about same size in the axilla, which seemed to be coalescing. I thought of cancer and advised immediate operation; ordered a nurse from Grand Rapids. Patient was prepared in usual way and I operated April 13th. The breast seemed to be normal, but fearing that the source of infection might be there I removed it, together with the axillary glands. The patient took the anæsthetic badly, chloroform being used, and I had to operate very rapidly. She made a very rapid recovery and, in four weeks, was doing her own housework, and

contrary to my orders again weaving carpet. The growths which I removed were sent to a pathologist for examination, who pronounced them secondary carcinoma. Then the question arose, where was the primary infection? The patient continued exceptionally well for five months, when she came to my office, and upon examination I found a new growth about two inches below the axilla the size of a pea. This I removed with a local anæsthetic Sept. 19. Patient was again very well until December, when she called again, and I found a large growth in the axilla. At this time I considered the case hopeless, but she was so anxious to do something that much against my will I consented to do the radical operation. Consequently I did so Dec. 17, just eight months after the first. I intended to use ether as an anæsthetic, but as I found considerable albumin in the urine, concluded to again trust chloroform. The patient was anæsthetized and I had made one sweep with the knife when she stopped breathing. I waited a moment, when, seeing that she was going to collapse, I dropped everything and begun Ochsner's method of resuscitating, viz., forcible compression of chest, followed by relaxing. I instructed the nurse to break a pearl of amyl nitrite on some gauze and hold to her mouth, for as I forcibly compressed the thorax and then relaxed I could hear air enter; this she did and patient soon rallied. I then very quickly removed both pectoralis major and minor muscles, together with a portion of the longissimus dorsi, a large area of skin and all the subcutaneous fat. I then opened the deep fascia in the axilla and found three tumors, the largest the size of a butternut, the other two somewhat smaller. The largest one seemed to be adherent to the axillary vein. At this point patient was doing badly and I was working very rapidly. In separating the growth I either wounded the main trunk of the vein or a large branch close to it, for a frightful hemorrhage ensued. I picked up an eight-inch compression forcep and in clamping it included the axillary artery in the bight. It seemed then as if hemorrhage started up everywhere, but a second forcep controlled it. My opinion as to what was best to do was formed in an instant. I remembered that a short time previous when I had operated for varicocele, that I had tied off the veins and left the artery intact, and for five days was so frightened that my hair stood on end, thinking the scrotum, testicle and penis were all becoming gangrenous. So in this case, with an aneurysm needle, armed with No. 4 catgut, I put two ligatures about one inch apart around both vein and artery, and then closed the wound,



Afterward, in looking up authorities to substantiate my theory, I found that Prof. Agrew, in operating for popliteal aneurism by ligating the femoral artery, accidentally wounded the femoral vein. The venous hemorrhage was profuse, but stopped immediately on tightening the ligature on the artery and did not afterward return.

Professor Langenbeck recommends that where a large vein is wounded and bleeding, the accompanying artery be tied as well as the injured vein. He believes that when both artery and vein are tied, not only does gangrene not occur, but there is less disturbance to the capillary circulation than when either is tied alone. He states that, by simultaneous ligation of both artery and vein, an equilibrium is maintained between the arteries and veins until a collateral circulation is established.

Professor Grillo, of Naples, reports 15 cases in which both femoral artery and vein were tied for aneurism—all were successful. While in 14 cases where the artery was tied alone there were two deaths from secondary hemorrhage.

After the patient was put to bed and had begun to rally she began to suffer intense pain in the arms, and I then realized what I had done—I had ligated the artery and vein without raising them, and had included in the ligature the median and ulnar nerves. I would have opened the wound and released the nerves, but expected the patient to die, so did not dare undertake it. The pain was controlled by morphine, hypodermically. In the morning, as the patient showed symptoms of rallying, I called up Dr. Richard Smith, and asked his advice. He advised letting it alone. The growth was malignant and would return. The paralysis of the arm was a secondary consideration. For three or four days the patient suffered severe pain, there was pricking sensations, and a feeling as if there were another hand. And, of course, paralysis both of motion and sensation. It was rather difficult to keep the arm and hand warm. Wishing for more authority on the subject I wrote Drs. W. J. Herdman, of Ann Arbor, and Hugh T. Patrick, of Chicago. Here is what they say:

January 10, 1905.

Dear Dr. Blanchard—I was much interested to learn the result in the case of Lena Sorenson. Evidently the trouble had progressed to such a degree when Patrick saw her that the exostosis could be much more readily detected at the time he saw her than when she was here. The neuritis was evident enough, but I doubt if an X-ray at that time would have made it plain that the spicular bone was the cause of the neuritis. I

am very glad that she has made such a very good recovery.

As to the other matter that your letter contained, the result alone will determine whether the nerve is so far injured as to result in its degeneration. It is not of necessity destroyed. The motor nerve may degenerate from the seat of ligature to the periphery and the sensory filaments will degenerate in their peripheral portions and also to some extent centrally perhaps; but when a healthy nerve is ligated in that way it will in all probability renew itself, so that I think you have reason to expect only a temporary paralysis. The renewal may take some months and should be assisted by massage and electric stimulus after the wound has entirely healed. With these precautions permanent disability is not likely to result.

It is an interesting condition and I would be glad to take a look at it some time.

Very truly yours,

W. J. HERDMAN.

December 30, 1904.

My Dear Doctor Blanchard—I am very much pleased to write you regarding Lena Sorenson, who was sent to me by Dr. William E. Morgan, of this city. Either she forgot that you had sent her to me, or chose not to mention it, or I have forgotten that she did mention it. Luckily, I hit the diagnosis correctly at my first examination. The case was one of cervical rib, a very rare condition even as an anatomical anomaly, and rarer still as the cause of nervous symptoms. An X-ray picture at once showed the diagnosis to be correct, and Dr. Morgan removed the rib. I hope that she will make a good recovery, but to hasten this much to be desired end she should receive proper electric treatments.

Unfortunately, before Miss Sorenson left she and I had a slight difference, and I fear that she hesitates to write me concerning further treatment. I told her that I should be glad to write to her home physician regarding the electric treatments.

Concerning your second case, I cannot speak with as much positiveness as I should desire, because I have never had just that particular thing to deal with. However, I would advise you to be upon the safe side, open up your wound and remove the ligatures. Should the catgut be very slow in absorbing, as is sometimes the case, you might have a permanent disability. In any event it is not a very serious operation to go in and take out your ligatures, and the patient is then in a position to make the most rapid recovery possible.

Very sincerely yours,

HUGH T. PATRICK.

I concluded, however, not to submit the patient to the danger of again taking an anæsthetic, and left the matter in the hands of Nature.

In looking up the matter of ligation of nerves I find the following:

Ochsner, in his latest work on surgery, says in regard to nerve suturing:

Researches upon this point have determined that small nerve branches are almost severed by the ligature; in the case of larger branches the constriction never immediately interrupts the continuity of the nerve, on account of the resistance of the neurilemma, but the transmission of impressions does not take place. If a nerve has been tied at the same time as an artery, possessing thick walls, by immediately removing the ligature the integrity of a certain number of nerve fibers may be counted upon. The anatomical changes which follow ligation are well described by Descot. There occurs a plastic infiltration above, below and around the ligature; the ends of the nerve are maintained in exact opposition by the thickening of the surrounding cellular tissue.

Waller discovered that after the continuity of a nerve is destroyed the peripheral end degenerates, but the degenerated segment is not destroyed, and after a time there takes place a true work of regeneration. He considered this work of regeneration to be the result of a kind of budding of the nerve fibers remaining in connection with the axis cylinder, the parts of the nerve separated from the nerve center not taking any part in the process. The fibers of new formation traversing the cicatrix in order to reach the peripheral end, where they are developed either in the interior of the old sheaths of Schwann or in their interstices.

In cases in which the ends cannot be adjusted absolutely without tension the distance between the nerve ends should be bridged over with fine catgut sutures, passing them back and forth between the divided extremities, each time passing through the end at a little distance from the previous point of perforation until a bundle of catgut has been produced approximately the size of the nerve being sutured. This should be applied so that there is no tension upon the sutures, which should lie loose between the nerve ends. When a sufficient amount has been arranged, the ends are tied and the entire bundle of catgut, with the nerve ends, are covered by reflecting a flap of fascia over them and attaching them to some of the soft tissues. By this method I have secured perfect functional results in a case where as much as three inches of the ulnar nerve had been destroyed.

In about four weeks the patient had so far recovered that she was doing her own housework, carrying the paralyzed arm, which she nicknamed "gamy," in a sling. I advised her to have it thoroughly rubbed or massaged every day and I called once a week and used the electric battery, assuring her that in time the use of the arm would be restored. In May, 1905, I noticed that the lymphatics in the neck were becoming enlarged, and the patient was very much worried. She concluded then that she would try the X-ray. Accordingly, she went to a neighboring town and began its use. After taking four or five treatments she came home with a very bad burn. The skin over the entire side of the chest and neck sloughed off and the burn seemed to penetrate deep into the tissues. She had chills every day; temperature 103. Auscultation showed the left lung almost completely solidified. Dr. Richard Smith being in town, I called him in to see the case. He concluded that there were metastases in the lung and that she would soon succumb. Contrary to our expectations, however, she rallied, the lung cleared up and patient was again quite well. Some time after this, however, probably in July, the arm began to swell. A hard growth could be felt just below the liver, and patient began to develop symptoms of cancer of stomach. From that time she continued to fail until her death, Sept. 17, about two years from the time of the appearance of the first growth near the left breast. About one month before her death, and eight months from the time of the operation, I discovered that sensation in the arm had returned and was normal, and that, notwithstanding the enormous swelling, the patient was able to bend the elbow and to flex and extend the fingers.

I regret very much that this patient could not have lived a few months longer, as I feel certain that the function of the nerves would have been fully restored.

#### CONTUSION OF THE HIP JOINT.

GEO. S. WILLIAMS, MUSKEGON.

Gentlemen—It is my purpose in this brief paper to simply call your attention to an injury of the hip joint which may appropriately be called contusion of the joint. This condition is but little spoken of in surgical literature, and that under the head of synovitis of the hip joint. The "Reference Hand Book" has the following: "Synovitis of the hip joint from traumatism may occur in sprains and contusions. The extent and course of such synovitis depends upon the nature and amount of the injury. In patients with tubercular predispositions, such injuries may pro-



duce tubercular disease. In certain cases a synovitis of this sort passes away without permanent injury; in other cases permanent disease or ankylosis remain."

In the four cases which have come under my observation, a marked similarity in nature of injury and course of disease has obtained. All four cases were injured by a fall, striking upon the great trochanter, thus forcing the head of the femur into the socket with about the same amount of contusion or injury to the joint surfaces, as evidenced by the symptoms, course of disease, and recovery. I believe this injury to the joint most liable to occur when the body has reached its mature weight and the joint its greatest resistance.

Women are more likely to sustain this injury than men, for the reason that they make less effort to save themselves in falling. In childhood this injury may excite hip joint disease.

The anatomy of this joint is well known to you all—the most perfect ball and socket joint in the body—its construction permitting a liberal degree of motion in all directions sustaining the superimposed body at the same time. Again, you know how difficult of palpation this joint is rendered by reason of its covering of soft tissues, and how hard it is to arrive at any accurate conclusions as to the condition within the capsule of the joint.

*Pathology.*—I believe we have a low type of non-destructive inflammation in and about the joint, involving its entire synovia. A variable amount of effusion may be thrown out. Later, adhesions may form, which restrict the motion of the joint. Muscular wasting of the affected side is soon observed.

*Diagnosis.*—In arriving at a conclusion in this affection, we must look diligently for any of the more serious injuries of this joint liable to be present as the result of an accident or trauma. By this means we shall eliminate all forms of fracture and dislocation. To distinguish between contusion of the joint and hysterical joint affections, which so closely resemble each other, we should keep in mind the fact that in the latter there may be no history of a fall or injury to the joint. Yet, this is not always true, as the trouble sometimes begins in this manner. Again, there is no rise of temperature in the latter, the pain, which resembles closely all injuries of the joint, is not so severe at night in the hysterical type. There is little or no wasting of the muscles in the last named trouble. In short, contusion of the joint is an inflammatory affection, and hysterical joint is not.

When there is doubt regarding the diagnosis

an X-ray picture or skiagraph may be taken of the joint, provided it is accessible. It is, however, only useful when a fracture is suspected. Another valuable aid in diagnosis is to make an examination of the injured joint while the patient is completely anesthetized. I am so impressed with the necessity of such a course that I would say that, without its employment, a correct diagnosis is very doubtful.

*Prognosis.*—Perfect recovery is the rule.

*Symptoms.*—Lameness, pain in the joint or its immediate region, no shortening, inability to bear the weight of the body on the affected side, no malposition of the thigh and leg; but a tendency to flex the thigh slightly.

There is traumatic fever accompanying the first few weeks of the malady. In my cases there were no external signs of a contusion at any time. Palpation gave no evidence of effusion or other injury, save tenderness and sensitiveness on pressure.

*Treatment.*—Rest is the essential factor of treatment in this affection. The patient must be put in bed and kept there until motion in the joint can be made without causing pain. A crutch splint may be necessary to hold the limb quiet. If extension seems to lessen the pain a weight and pulley should be applied. Pain must be relieved with opiates when very severe. Hot fomentations may do much to relieve the earlier symptoms, and blisters may also be useful. When passive motions can be made without causing pain in the joint, the patient may be allowed to sit up, get about on crutches, and the joint put to slight use when no pain or soreness is felt.

A brief history of the four cases which form the basis of this paper may be interesting. All were women, ages ranging from 17 to 35 years, showing the period of adult life in which this injury is most likely to occur.

CASE No. 1.—Mrs. B., married, age 35 years, healthy, family history good. Walked off the sidewalk into a stairway leading to a basement, landing on the right side on the sandy bottom of the cellar. Patient was removed to her home, and found to have sustained a contusion of the right hip joint; recovered in six months.

CASE No. 2.—Mrs. C., age 32, married, healthy, family history good. Was thrown from a cutter to the pavement, striking on the left side, sustaining the same injury to the left joint. This patient was very nervous at all times, but made a complete recovery in six months.

CASE No. 3.—Mrs. Mc., age 26, married, strong and healthy, family history negative. Was thrown from a carriage, striking on the turf by the side of the street, on the right side, producing a simi-



lar result in the right joint; recovery in about six months.

CASE No. 4.—Miss S., age 17 years, strong and healthy, family history good. This patient was thrown from her wheel upon a pile of sand, striking on her right side. After some moments she managed to mount her wheel and ride home, using the left foot on the peddle. The next day I was called and found a contusion of the right hip joint. No dressing was applied, as she seemed to remain perfectly quiet. The pain was very severe always, and worse at night. Her temperature ranged from 99° to 101° during the next four weeks. After three months in bed this patient was able to be about on crutches, which she continued to use for nearly a year. This long use of crutches is explained by the fact that her guardian brought suit against the city for personal damages due to negligence.

About fifteen months after the accident, and just before the trial, this patient was examined by the city physician, Dr. Jacob Oosting, and myself, to determine if there was still any remaining evidence of the injury to the joint. Our examination was made under complete anesthesia, with the following result: both limbs could be extended and were of same length, left thigh could be flexed so that the knee met the chest; on the injured, or right side, the thigh could only be flexed to right angle with the body. If carried further the pelvis moved with it, showing that the joint was restricted in its motion by adhesions. There was no roughness within the joint. I think this case would have gotten well in six or eight months had it not fallen into a legal rut.

In conclusion, I wish to say that "contusion of the hip joint" seems to me a proper name for a serious injury to the hip joint, requiring early recognition and proper management for the best interest of the patient, the mental relief of their friends, and the credit of the physician in charge of the case.

#### INGHAM COUNTY.

The Ingham County Medical Society held its fourth annual meeting on Nov. 16th, 1905, at the residence of Dr. L. Anna Ballard, Lansing. The following doctors were present: A. E. Bulson, District Councilor, Jackson, and Doctors Campbell, A. D. Hagadorn, J. W. Hagadorn, Toles, Wade, Jones, Black, Brucher, Miller, Hage, Alexander, Jenkins, Rulson, Tyler, Osborn, Dunning, Barber, Cora Gannev, Gertrude Campbell, May Wetinox, and L. Anna Ballard. With the wives of the doctors there were forty-five present. President Campbell gave an able and interesting

address on "Tuberculosis and Its Treatment." Councilor Bulson gave an enthusiastic talk. Officers were elected as follows:

President—J. W. Hagadorn, Lansing.

Vice-President—G. B. Wade, Laingsburg.

Secretary-Treasurer—L. Anna Ballard, Lansing.

L. ANNA BALLARD, Sec'y.

#### TUBERCULOSIS AND ITS TREATMENT.

J. F. CAMPBELL, LANSING.

I wish to place before the society a few facts about a common and fatal disease. So common that we are apt to treat it with indifference, as we do all common things. The time nor place will not allow a complete discussion of all the phases of this interesting and important subject.

That tuberculosis is contagious is now an admitted scientific fact. The communicability of tuberculosis is a doctrine dating as far backward as the history of medicine extends. Eminent physicians in every age have held that the disease may be communicated under circumstances which involve close proximity, as from husband to wife, wife to husband, brother to sister, sister to brother, mother to child, patient to nurse, etc. The father of medicine taught that tuberculosis was a disease most difficult to treat and most fatal to the greatest number. Its contagiousness was recognized by medical men during the middle ages, and as long ago as 1865 it was proven by experiments on animals that tuberculosis could be transmitted from one individual to another.

If tuberculosis is a contagious disease it is preventable. The prevention of the spread of the disease resolves itself into the complete destruction of the sputum of the afflicted, which (the sputum) retains its poison for a long time. Outside of the body the germs are most often found in the dust of rooms occupied by the sick, and it has been often demonstrated that dust from hospitals, prisons, hotel bedrooms, private houses, etc., where the sick with this disease have been, is capable of causing the disease in the lower animals.

The dust may retain its power of producing tuberculosis for months. In ordinary breathing the air expired is free from germs. When talking, however, there is an unseen spray ejected from the mouth, which contains the germs. This is more apt to be the case in forcible talking, hawking, spitting, and good authorities say this spray is a greater source of danger than the dry sputum.

The germ grows slowly outside of the body. The light of the sun quickly destroys it. It will not live long in a perfectly dry state. It must have moisture, like other plant life. But in

dark, moist places it may live for days. It enters the body in a number of ways. It may be in the air we breathe, and enter the lungs directly, or it lodges in the tonsils and is carried to different parts of the body by the lymph channels. It may be swallowed. It may gain access to the body through a scratch on the skin. In a large majority of cases it attacks the lungs, producing softening and breaking down of lung tissue. The patient coughs and expectorates and casts out millions of these germs; as many as one hundred million to sixteen drops of sputum. As long as the sputum is moist the germs are harmless. When it dries they are set free and mingle with the dust. When the dust is stirred up, as in sweeping, the air becomes filled with the germs. When the air is still, they settle to the floor. Children, creeping about the floor, and putting fingers and objects in their mouths, swallow them, and in this way contract tuberculosis. Flies settle on the sputum and carry germs to be deposited upon the food we eat or in what we drink. When the sick expectorate on the sidewalk the germs mingle with the dust and are blown everywhere. The undried sputum on the sidewalk may contaminate a lady's long trailing skirt and be carried to the home and then set free to poison her family. The germ is found only in the sputum. Let this be promptly cared for and the victim may mingle with the public. The most important question for doctors today is the prevention and entire wiping out of tuberculosis, but I do not believe the measures for the prevention of this disease can ever be enforced until the people in general, and especially those who have the disease, or are associated with those who have it, become properly educated on this subject, and *educated* (not alarmed) in a rational way. And for the purpose of this being pulsory notification of every case of tuberculosis. If good is to be brought about it is by giving the people knowledge of this disease that they will know perfectly wherein the danger lies. It should be impressed upon them that this is principally in one direction, viz., the sputum. It should be constantly kept in the minds of the people that it is the sputum and the sputum alone that is the chief cause in the spread of tuberculosis. Tuberculosis is not hereditary. To inherit consumption it would be necessary for the germ to be transmitted from parent to child, and we know that this practically never happens. It, heredity, is simply a predisposing cause like alcoholism, bad air, bad ventilation, bad surroundings, catching cold, and certain diseases like measles and whooping-cough, these prepare in the

system a suitable soil for the propagation and growth of the specific germ.

Tuberculosis is also curable, or at least recoverable, and yet it is the most prevalent and most fatal disease known at the present time. One-sixth of all deaths, and one-third of all deaths between the ages of 15 and 45 are due to this disease. In Michigan about 3,500 deaths occur from this disease yearly. The death rate in Michigan is greater than that from diphtheria, croup, scarlet fever, measles, cerebro-spinal meningitis, typhoid fever and small-pox combined. According to the best authority, the annual tribute of the United States to this scourge is upward of 150,000 of its people. Each year the world gives up 1,100,000, each day 3,000, each minute two of its people to this plague. Four hundred homes of this country today are mourning for their loved ones. A mere repetition of yesterday's sorrows, and the angel of death is hastening to the 400 marked for tomorrow.

The money loss to the State of Michigan is enormous. The loss from inability to work on the part of those sick, the care of the sick and helpless, and other losses, would reach the sum of \$15,000,000, and the loss resulting in the United States from this disease, a great proportion of which is needless and preventable, is estimated at \$240,000,000 a year. These incomprehensible figures are not overestimated. This estimate does not take into account the social and sentimental value of 150,000 lives which under different conditions might hope to live for many years.

Consumption is curable. It is not cured by patent medicines, quack doctors, or secret remedies. The doctor who relies on cod-liver oil, whiskey and change of climate will never cure a case—but it is curable by the scientific use of fresh air, sunlight, rest, pure water, bathing, proper clothing, plenty of good, pure food, as milk, eggs, beefsteak, butter, fruit, etc., etc. Consumption can be cured in any climate. No special climatic advantages of air are claimed for the hospitals in New York, Massachusetts, Pennsylvania, Connecticut and other states in which tuberculosis is treated so successfully. Dr. Flick, of Philadelphia, director of the Phipps Institute, says: "Tuberculosis can be successfully treated anywhere. Climate has practically nothing to do with the matter. Formerly climate was looked upon as the most important factor in the production of tuberculosis, consequently it was looked upon as the most important factor in the treatment."

Dr. Cornet, of Berlin, an authority of world-wide reputation, says: "Today we rightly regard



no one climate as specific. It occurs in the warmth of the south as well as in the colder north. Recoveries are seen in all climes."

According to the mortality reports of the twelfth United States census, the decrease in the death rate per 100,000, which was in 1890 254.4 per 100,000, in 1900 was 190.5 per 100,000. This decrease was brought about by the modern methods of prevention and scientific ways of treatment of this disease.

From the years 1898 to 1902 the death rate in Michigan has decreased from 112 per one hundred thousand to 86 per one hundred thousand. One-half of this decrease in Michigan has taken place during the last five years, during which time the State Board of Health has been conducting a special effort of education against the disease. If to the measures already introduced could be added other measures for the prevention of this disease which sanitarians have evolved, it is asserted that in our generation consumption would be eliminated as a cause of death in Michigan.

Now, "the pearl of great price—the one thing needful," and the most important measures to be brought about for the prevention and cure of consumption is the establishment by the State of hospitals for the indigent cases of the disease, these to be in control of competent physicians, who will in every way look after the welfare of those sick therein. Statistics from the various hospitals or sanatoriums in this country and in Europe go to show that from fifty to eighty per cent. of those sick in the early stage of this disease are cured in these institutions.

The committee of the State Medical Society secured from the legislature last winter an appropriation of \$30,000, of which \$20,000 is to be used the first year for a building, and maintaining it, and the remaining \$10,000 is intended only for the maintaining during the second year. This project of the profession of the State to provide a sanatorium for the dependent class suffering with tuberculosis has been assisted by Governor Warner by the appointment of a Board of Trustees. The trustees are now ready to proceed with the founding of the institution as far as the limited sum permits. In the year 1903 the various townships, villages, cities and counties of the State spent \$143,156 for the care of indigent persons sick with small-pox, which is the least important of the diseases which endanger the public health, and only \$1,347 for the care of those sick with consumption, the most important of the diseases which endanger the public health. Is this fair play? Is this a square deal? Why should we or the State take care of one class of patients

sick with a contagious disease, and neglect another class?

If our community is visited with a contagious disease, small-pox, for instance, the people go crazy, the health officer is at once notified, the community is shut out, the patient is shut in or hurried away to the contagious hospital, and there he is furnished with a nurse at two or three dollars a day, his grocery bills are paid, all his daily needs and wants are supplied, a doctor is sent to look after him and he peeps through the window at him and is paid by the county \$5 to \$10 a visit, and the patient gets well.

How do we treat a patient with consumption? Usually with indifference. The friends prescribe cod-liver oil, which the patient cannot digest, and the physician cod-liver oil and whiskey, and the patient dies.

We, as intelligent men and women, should install a campaign of education in favor of this neglected, suffering class. It is in our hands as promoters and conservers of the public health to correct this prevailing wrong.

Why should we sit unconcerned while our community and State are invaded by a preventable and curable disease?

Why should we pillow our heads on the bosom of indifference while our fellow men are neglected and left dying by our sides?

#### JACKSON COUNTY.

The Jackson County Medical Society held its fifth annual meeting at Jackson City Hospital Dec. 7th, 1905. Dr. C. H. Lewis, President, gave an address on "The Building of a Physician." The following officers were elected for 1906:

President—Dr. A. J. Roberts.

Vice-President—Dr. J. C. Kugler.

Secretary—Dr. R. Grace Hendrick.

Treasurer—Dr. F. W. Rogers.

Delegate—Dr. C. H. Lewis.

Alternate Delegate—Dr. N. H. Williams.

The rest of the time was devoted to clinics.

Dr. Robinson presented a case of varicose veins. Mr. M., age 52. Family and personal history negative. Trouble dates back six months, when veins of left leg began to enlarge. A swelling at inner side of knee was particularly tender and troublesome; whole leg oedematous and eczema and pigmentation at lower and outer side.

Dr. Robinson reviewed causes briefly: due to some interference to circulation through the vein; to heart lesion; to tumors (but this not sufficient, as some tumors, the largest and most troublesome, will not cause dilated veins); acitis;



pregnancy; phlebitis, with lessening of resistance of middle and muscular coats and consequent dilatation, causing incompetency of valves.

Trendelenburg sign useful here: elevate the limb, thus freeing it of blood. Then placing the thumb on the saphenous vein, high up; the patient is allowed to stand, when the vein will fill slowly and imperfectly from below. Then if finger is removed the blood will rush down into the vein rapidly.

Complications varied: Phlebitis, thrombosis, thrombo-phlebitis, with infection and suppuration; clots may be broken and produce emboli; may have rupture of vein, whose wall is weakened and fatal hemorrhage; ulcer and eczema.

Treatment: palliative and radical. Of the former, rest in bed with leg in elevated position. Bandaging. Prefer radical treatment. Patient did not wish to take chloroform. Was given a hypodermic of scopolamine 1-100 gr. and morphine 1-6 gr. Dr. Robinson spoke of the different operations devised for this purpose: Slude, Trendelenburg. In this case two inches of the long saphenous vein was removed from the upper part of the lower third of the thigh, and two inches of vein from below the knee. Patient said he felt no pain during the procedure.

Dr. Taylor then demonstrated Kelly's method of curettement, used in cases of muco-purulent discharge. Many cases curetted repeatedly by the old method are finally cured at Johns Hopkins by this procedure. Kelly uses a corrugated curette, corrugated on both sides, perfectly safe, even in hands of a novice, for dull, but clears uterine cavity and cervical canal perfectly. At Johns Hopkins they sometimes administer gas for the operation, as their skill is such as to require only 10 minutes for the work. Cauterize the cervical canal after curetting.

Dr. Taylor operated on two cases.

First Case.—Mrs. A., age 31, married 5 years; two children; youngest 3 years; miscarriage in June; menstruation regular; a profuse discharge since birth of last child.

Case 2.—Woman, 33 years of age; two children; youngest 3 years old; menstruates profusely; leucorrhoeal discharge since 14 years of age.

Dr. Kugler operated on a case of varicose veins, removing large portion of saphenous vein and grafting skin on an ulcer of the lower leg.

The annual banquet was served at the Otsego in the evening.

Dr. David Inglis and Dr. Andrew P. Biddle, of the Michigan State Medical Society, were the guests of honor.

R. GRACE HENDRICK, Sec'y.

## SANILAC COUNTY.

The fourth annual meeting of the Sanilac County Medical Society was held in Sandusky, Mich., Dec. 4th, and was very successful, both in the matter of attendance and in the papers read and discussed. Dr. Angus McLean, of Detroit, presented a paper on "Gall Stones and Experiments on the Bile Secretion."

### Abstract.—

The doctor presented several diagrams and tables of experiments on the biliary flow which demonstrated that the saline cathartics have a much more marked effect in increasing the biliary flow than the mercurials. The action of the salines is much more rapid. It was also demonstrated that the liver has not the same excretory powers as the other emunctories. Several patients were given methylene blue until the urine was highly colored, and no trace of the drug could be found in the bile. This was also true of other drugs experimented upon, especially the iodides. It was also demonstrated that the so-called biliary dissolvents and cholegogues have no effect upon the dissolution and removal of the stones. The improvement following their administration is due to the fact that they relieve the congestion and inflammation of the biliary tracts, thereby producing a latent condition of the gall stones which may last but a short time, or in other cases an indefinite period, and the patient must sooner or later submit to surgical interference for permanent relief.

C. F. Gates addressed the meeting on the "Modern Legislation As Affecting Physicians," and the retiring President, Dr. D. D. McNaughton, of Argyle, spoke in his address of the "Duties of Physicians Toward Each Other."

The following officers were elected for the ensuing year:

President—B. E. Bush, Crosswell.

Vice-President—J. W. Weed, Brown City.

Secretary-Treasurer—G. S. Tweedie, Sandusky.

Delegate—L. E. Cochran, Peck.

Alternate—S. B. Young, Melvin.

GEO. S. TWEEDIE, Sec'y.

## SHIAWASSEE COUNTY.

The annual meeting of the Shiawassee County Medical Society was held on Dec. 5, at which time the following were unanimously elected as officers of the society for the ensuing year:

President—Dr. J. N. Eldred, Chesaning.

Vice-President—Dr. A. L. Arnold, Owosso.

Secretary-Treasurer—Dr. J. A. Rowley, Durand.

Delegate to State Society—Dr. T. N. Youmans, Bancroft.

Alternate—Dr. J. C. Tufford, Owosso.

Board of Directors—Dr. Wm. Shaw, of Morrice; Dr. W. E. Ward, Owosso; Dr. E. J. Carney, of Durand.

The report of the Secretary-Treasurer showed the society to be in a very pleasing condition.

Dr. C. B. Burr, of Flint, Councilor for the Sixth District, was a welcomed visitor at the meeting and gave the society one of his pleasing and able talks.

A paper was read by Dr. T. N. Youmans, of Bancroft. A case in practice, on "Ectopic Gestation."

The following resolution was read and unanimously adopted by the society at this meeting:

Whereas, The medical profession has always been leaders in all sanitary matters, and ever been prominent in protecting the health and lives of the people; and

Whereas, The Proprietary Association of America, one of the most powerful organizations of its kind in the country, from a financial point of view, has subsidized the press, and throttled free speech by their "contract of silence," in order that they may pursue their despicable business of thriving on misrepresentation and fraud, and prospering by deceiving the sick and afflicted; therefore,

Resolved, That we heartily indorse and commend the action of the *Journal of the American Medical Association*, *Collier's Weekly* and *The Ladies' Home Journal* in exposing the "Great American Fraud" which is sapping the vitality, life and manhood of the people by creating appetites for alcohol, morphine and cocaine by means of their nostrums.

Resolved, That we publicly denounce newspapers and journals that enter into this "red letter" contract, and thus for pecuniary considerations willfully conspire to mislead and deceive their readers, and that we use our best endeavors to protect the community against the baleful influence of patent nostrums and proprietary frauds.

P. S. WILLSON, Sec'y.

### ECTOPIC GESTATION.

T. N. YOUMANS, BANCROFT.

The subject of ectopic pregnancy has taken a more prominent place in our medical literature the past two or three years than before that time. It is the opinion of most writers on that subject that the average medical man is unable to recognize this condition, and cases that occurred in their practice have died from internal hemorrhage, sepsis, general peritonitis, etc., while perhaps a small percentage has recovered after a prolonged sickness, in which cases the products of concep-

tion have been walled off, absorbed by the system, or perhaps stuffed their way through the walls of the vagina or intestine directly, or after an abscess has developed and drained off that way.

That these cases are rare goes without saying. However, I was reading an article on the subject just recently in which the writer reported two or three cases that had come to his notice. This man claimed that this condition is not so extremely rare and gave what seemed to me to be a very high percentage of pregnancy cases in which the foetus attempted to develop outside the uterus. I do not remember the per cent. he gave but I think it was as high as 1 or 2 per cent. of all cases.

It seems to be the consensus of opinion that there is always some chronic inflammatory or other abnormal condition of the tube that prevents the impregnated ovum from passing into the uterus.

Patient, aged 22, a stranger to me, called me June 29th, 1905. She had been married two years, and one year previously had had a miscarriage at about the second or third month, but was not attended by a physician and, in fact, she had not consulted a physician since that time. Since the miscarriage she has had painful menstruation, but was quite regular as to time, duration of period, etc. With this exception she thought she had been in quite good health, though she suffered a good deal from neuralgia of the ovary, as she expressed it.

On this occasion her menstrual period came on ten days later than usual and it had already lasted nine days. The flow was not normal in regularity or amount. It would come on for a few hours or a day or so and stop for a while, and begin again in somewhat the same way during the whole nine days.

Besides this there was a pain in the left ovarian region, quite sharp at times, the relief of which she said was the reason she sent for me.

She said she did not think she was pregnant, and I could obtain no symptoms of pregnancy except that the pains made her a little sick at the stomach.

Digital examination revealed an enlarged and very sensitive tube on the left side, uterus about normal in size and cervix closed. From the history of the case since the miscarriage and the symptoms at the time, with the absence of clots or shreds of decidual membrane on the napkins I examined I was unable to make a positive diagnosis. I prescribed the usual treatment for painful and irregular menstruation and told them to report the following day. Her husband said that



evening that his wife was feeling easier and she thought she would get along as well as usual. I heard nothing more from the case until July 11th, twelve days later, when her husband came to me and said that his wife was having terrible pain and that she seemed very weak. He said she had been quite free from pain since I first saw her and that she had even been riding the roller or harrow the day before. But she had continued to have this same irregular and slight flow.

I found the patient in collapse, but at that time practically free from pain, though she was extremely sensitive, so much that I could not touch her from pubes to the fourth or fifth rib. Neither could she take a normal inspiration for the same reason. She had vomited a considerable amount that morning when she was having this pain. Abdomen was decidedly tympanic. Temperature 99.4, pulse very weak and rapid and expression anxious—quite a typical picture of acute general peritonitis at this time.

Eight hours later Dr. Rowley saw the case with me and we diagnosed it extrauterine pregnancy with ruptured tube, but too weak to stand an operation at that time. She received supportive treatment, liquid diet, saline enemas and was kept quiet as possible. She improved considerably during the next few days—there apparently having been no more bleeding internally, though she continued to pass some blood per vagina every day, and I obtained three or four distinct shreds of decidual membrane, which helped to confirm the diagnosis.

On July 19th, eight days after the rupture and twenty-one days after I first saw the case, we operated on her. Dr. Peterson, of Ann Arbor, Drs. Fair and Rowley and myself. On opening the abdomen Dr. Peterson removed about one and one-half quarts of blood clots, the products of conception, the ruptured tube, and ovary. The ruptured tube was found to be chronically inflamed, but Dr. Peterson thought best not to remove it. Patient rallied nicely from the operation and made a perfectly smooth recovery. She was out of bed in a little over three weeks in fine condition, and she has been in good health since that time.

#### TRI-COUNTY.

The annual meeting of the Tri-County Medical Society was held Oct. 4th, at Cadillac, and was well attended. The scientific program consisted of papers on "La Grippe and Influenza," by E. B. Babcock; "Burns," by Carroll E. Miller, and "Chronic Diseases of the Kidney," by S.

E. Neihardt. These papers were quite generally discussed, after which the following officers were elected and the society enjoyed a generous luncheon at the Globe restaurant:

President—E. B. Babcock, Kalkaska.

Vice-President—J. W. Decker, Lake City.

Secretary-Treasurer—W. B. Wallace, Cadillac.

Delegate—S. E. Neihardt, South Boardman.

Alternate—P. W. Pearsall, Kalkaska.

The next monthly meeting of the Tri-County Medical Society was held in Cadillac, Dec. 6th. A paper on the "Surgical Treatment of Tuberculosis," with report of cases, was read by Dr. McMullen, of Cadillac. This paper, as does every article on tuberculosis in any of its various forms, called out a full and animated discussion.

A motion was made and carried by the society thanking the *New York World*, *The Ladies' Home Journal*, *Collier's Weekly* and the *Journal of the American Medical Association* for the great interest they have taken and the course they are pursuing in calling the attention of the public to the abuses and dangers and the methods of the patent medicine companies.

It was decided to hold our social meeting Jan. 5th, 1906, at which time a theater party will be made up, to be followed by a banquet. This has proven one of the most interesting events of our yearly meetings. At this meeting not only the doctors but their wives are present. To show that our members are interested, we have two that seldom miss a meeting and yet have to come about forty-five miles. At our last meeting these two members were present, one from twelve miles beyond them, and one who has to drive twenty miles and then take the train the remaining twelve miles. Can any other county society in the State show a greater interest than that?

W. B. WALLACE, Sec'y.

## Medical News.

### Medical Affairs in the Arctic Regions.—

Some interesting notes made in a summer trip to North Greenland in the supply ship of the Peary expedition are published by Nicholas Senn, Chicago (*Journal A. M. A.*, Nov. 18 and 25). The Smith's Sound Eskimos met by him are the original unadulterated stock and present many peculiar and interesting racial features, especially as regards their habits and resistance to disease. To their exclusively carnivorous diet Senn ascribes not only their freedom from scurvy, the scourge of arctic expeditions, but also the absence among them of enlarged tonsils and cervical lymphatic glands and goiter, as well as their



splendid teeth and strong lower jaws. He suggests that the absence of all vegetable food from the diet has shortened the gastrointestinal canal, that the appendix, if present, is only rudimentary, and that the glands concerned in the digestion of starchy food have atrophied while those needed in the digestion of meat and the emulsification of fats are hypertrophied. The large percentage of oils in the diet acts as a laxative and protects them from a multitude of ailments with which the physician has to deal in our civilization. Their freedom from skin diseases, in spite of their uncleanly habits, is remarked, and Senn thinks that perhaps their avoidance of the external use of water may be a factor in producing this result. Tuberculosis is unknown among them in their northern home, though they quickly succumb to it when brought to our climate. Venereal diseases take with them a very mild course. Insanity is unknown among them, but in the long winters an anemic condition develops, and with it certain hysterical symptoms may occur, but the anemia never becomes chronic. During the summer there is a corresponding plethora and attacks of epistaxis are common. Degenerative diseases, arteriosclerosis, Bright's disease, etc., seem to be notably absent. Ordinarily, coughs and colds are unknown, catarrhal attacks follow visits to ships and are expected. Introduced epidemic disorders have played havoc among these people, and Senn mentions a sort of arctic dysentery that seems to have started from Finland and traveled nearly around the arctic circle. He suggests that the infection must have been conveyed over the vast uninhabited tracts by migratory birds. The universal epidemic, la grippe, has also helped to decimate these people. The Eskimos appear to have no native medicine, and their ideas of surgery are practically *nil*. Suppurating wounds, however, are rare in the germ-free atmosphere of their habitat. Tumors seem to be unknown, and Senn is inclined to attribute this, in part at least, to the highly iodized meat diet. Their obstetric methods are primitive and childbirth is not a severe operation. Children are nursed until two or more years old, and are generally healthy. He thinks uterine and ovarian diseases are uncommon. In conclusion, he mentions a peculiar distemper of dogs, resembling rabies, but differing in certain respects. Animal parasites, such as tapeworm, appear to be rare.

**Centennial Celebration of a United Profession in New York.**—As will be noted in our news department, the New York State Medical Association, at its annual meeting this week, again endorsed the report of the Committee on Amalgamation with the Medical Society of the State of New York. As will be remembered, a year ago the report of the committee was adopted but it was afterward discovered that certain legal formalities had to be gone through before the New York State Medical Association could give

up its existence and merge into the society. The legal difficulties involved notifying every member of the association and giving him the right to vote on the proposition. The result, judging from a telegram received as we go to press, shows that the vote in favor of amalgamation was almost unanimous. The other legal formalities, as we understand it, will necessitate but little time, and it is now hoped that the next annual meeting of the Medical Society of the State of New York, to be held in Albany next January—which will be its hundredth meeting—will be a grand centennial celebration of a united profession of the Empire State. The congratulations of the physicians of the entire country are extended, we are sure, to the members of the Association and of the Society who have worked so diligently to bring about this union.—*American Medical Association Journal*, October 21, 1905.

Orletus Palmer Eaton, M. D., died at Bloomdale, Mich., Oct. 4th, aged 60 years.

Helen Frances Warner, A. B., M. D., died at Detroit, Mich., Oct. 23rd, aged 62 years.

Ralph Gilmore Cook, M. D., married Miss Hardee Esther Mundwiler at Vicksburg, Mich., July 5th.

Elsie S. Pratt, M. D., who was last year in the New England Hospital at Roxbury, Mass., has recently located at Kalamazoo, Mich.

Beginning January 1, 1906, a new law requiring birth certificates will go into effect in all parts of Michigan. The blank contains, among other items, the exact date of birth, including the hour of birth. All of the certificates of the births occurring in January will be mailed by the local registrars to the State Department at Lansing on February 4, and when received the returns will be examined with interest to ascertain the name and place of birth of the first child born during the year and registered under the new law. Announcement will be made in the January issue of the *Michigan Monthly Bulletin of Vital Statistics*, published by the Secretary of State. The new law will mean a great increase in the accuracy of statistics and in the legal value of the records.

The copy of the *Transactions of the Michigan State Medical Society* for the year 1886 is missing from the library of the University of Michigan, and they are very desirous of completing their records and files. The edition is exhausted and the secretary of the State society cannot furnish the desired volume. Has any member such volume that he could and would donate to this library? The library of the university is a complete and up-to-date one and would appreciate very much this kindness. Address the Secretary of the Michigan State Medical Society, or Dr. W. J. Herdman, Ann Arbor.

With the January issue in preparation, we change the name of *The Alkaloidal Clinic* to one which more fully embodies the scope of our propaganda, namely, *The American Journal of Clinical Medicine*.

We have added to our present strong editorial force (all of which is retained, and with no change in management, or any financial change

whatever), Dr. Wm. J. Robinson of New York City, who will conduct a department of "Dermatology and Genitourinary Diseases;" Dr. Emory Lanphear of St. Louis, who will conduct a department of "Surgery, Obstetrics and Gynecology," and other departments will be added as arrangements can be made therefor.

With this additional force, the make-up of the journal will be improved in many ways. The best minds in this country and Europe will contribute articles which will be of inestimable value to the general practitioner who is willing to learn and anxious to keep up with the times. Our platform is as broad as the world. We believe the physician should pluck the health-giving fruit, it matters not from what garden. Active principle therapy, surgery, synthetic chemistry, massage, electricity, serum therapy, hydro-therapy, radio-therapy, etc., etc., all of these offer us in mighty weapons for our battle with the enemies of the human race, disease and death, and the new, enlarged, rejuvenated, and strengthened *Clinic* now called (as better indicating its scope), "*The American Journal of Clinical Medicine*," will include all these weapons in its armamentarium. It will give its readers all that is best in medicine, all that is best in the literature of the world, all that is most helpful, most practical.

The underlying principle of our great work is to safeguard the medical profession, to help them to higher planes of practice, to greater personal success, to bettered conditions in every possible way.

We are opposed to quackery, however and wherever it appears. We are opposed to proprietary advertising to the laity against the medical profession, to the detriment of the people.

We are opposed to the secret nostrum and the rum remedy, decrying their exploitation to the profession, and more especially to the people, as a body-wrecking, soul-destroyed crime that should be suppressed.

We believe in and stand for the honest doctor and the honest pharmacist; their interests are mutual, and we decry all attempts to estrange them.

We are fully alive to the great awakening of the public conscience now going on, proposing to stand on the very firing line of the movement for professional betterment and the public good, never taking a back step till a complete victory is won, and then we'll stick, too. We shall appreciate your co-operation.

DRS. ABBOTT & WAUGH, Editors.

## Correspondence.

Traverse City, Dec. 1, 1905.

EDITOR:

Can you offer a reasonable explanation justifying the *indirect advertising* practiced by a number of men of the medical profession by allowing their names to appear in the lay press in connection with cases. We all deplore and discountenance advertising of the charlatan and the quack, yet if mere advertising renders us quacks then as sure as the earth is round a great many of us are quacks. Personally I have always con-

sidered the issuing of so-called "bulletins" over one's name, and granting interviews with lay reporters, knowing full well that the interview will appear over one's name, as deliberate and malicious a form of advertising as the posting of specially prepared, flaming sheets on the barns and telephone poles of the country side. The question is a serious one; for though we feel the responsibility of maintaining the dignity and sanctity of the profession it is idle to argue that these are the main incentives to induce us to enter and continue in the practice of medicine. We follow the avocation as a means of livelihood. And is it not plain to everyone that the man who advertises has a decided advantage, all other things being equal, over the strict custodian of the serious and, may I say *sacred*, features of the practice of medicine and surgery. The custom is not only unfair, but it militates against and tends to destroy all progress towards the ideal practice, and renders it almost impossible to establish and maintain the proper general respect for our high profession. I believe that leaders and recognized authorities should eliminate this practice from their plans, this being the only course which will bring about a universal observance of what we all know to be the proper custom.

I know of small communities where all advertising, direct and indirect, has been condemned, and this condemnation strictly observed in practice by men of the profession in these communities, yet I am convinced that the inevitable fate of such reforms will be failure unless the profession at large (all specialists, city men, professors and consultants included) fall strictly into line. Inconsistencies may thrive for a time yet the age is too intelligently progressive, commercially, to admit of the survival of institutions built on a sandy foundation. May the time be near at hand when this evil will be eradicated in toto from the practice of medicine.

Yours sincerely,

ALBERT H. HALIDAY.

DR. WM. J. HERDMAN, OF ANN ARBOR,  
APPOINTED COUNCILOR OF THE  
FIRST COUNCILOR DISTRICT.

Detroit, Dec. 19, 1905.

Wm. J. Herdman, M. D.,  
Ann Arbor, Mich.

Sir: I have the honor to inform you that the President has appointed you Councilor of the First Councilor District, vice Leartus Connor, M. D., resigned, to serve until the House of Delegates shall have elected at the next annual meeting of the Michigan State Medical Society a successor to fill Dr. Connor's unexpired term (to 1909).

The Secretary of the Council has been notified of your appointment.

Permit me to extend my congratulations and my own pleasure at your selection, which I know will meet with the cordial approval of the profession of the State.

Respectfully,

ANDREW P. BIDDLE,  
General Secretary.



## Book Notices.

**MINOR AND OPERATIVE SURGERY, INCLUDING BANDAGING.** By Henry R. Wharton, M. D., Professor of Clinical Surgery in the Woman's Medical College of Pennsylvania; Surgeon to the Presbyterian Hospital, and the Children's Hospital; Consulting Surgeon to St. Christopher's Hospital, the Bryn Mawr Hospital, and Girard College; Fellow of the American Surgical Association. Sixth Edition. Enlarged and thoroughly revised. Lea Brothers & Co., Philadelphia.

In this edition the author has added considerable new material, which of necessity in a book of this kind must be brief. The chapters pertaining particularly to minor surgery are very satisfactory, and should be of considerable benefit to the undergraduate. The illustrations and descriptions of bandaging are very complete.

**GENITO URINARY SURGERY AND VENEREAL DISEASES** By William White, M. D., Professor of Surgery, University of Pennsylvania, and Edward Martin, M. D., Professor of Clinical Surgery, University of Pennsylvania. Illustrated with 300 engravings and fourteen colored plates. Sixth edition, thoroughly revised and enlarged. J. B. Lippincott & Co., Philadelphia and London, 1905.

In this work, which has long been recognized as a standard, Drs. White and Martin have made many and marked improvements in their revision, by drawing freely from the current literature. The section on prostatic hypertrophy has been largely rewritten, and many new illustrations have been added. A special feature is the index, which is a marked departure from the general run of indexes, and as far as we know is unique in that under each heading appears a short paragraph giving the different factors in the etiology, another devoted to symptomatology, treatment, etc. The index is more in the nature of an outline of the book, but in alphabetical order, and in itself would be very handy for quick reference, without referring to the text, if all that is wanted is to recall the general subjects.

**LECTURES ON AUTO-INTOXICATION IN DISEASE, OR SELF-POISONING OF THE INDIVIDUAL.** By Ch. Bouchard, Professor of Pathology and Therapeutics; Member of the Academy of Medicine and Physician to the Hospitals, Paris. Translated, with a Preface and New Chapters added, by Thomas Oliver, M. A., M. D., F. R. C. P., Professor of Physiology, University of Durham; Physician to the Royal Infirmary, New-Castle-Upon-Tyne; Formerly Examiner in Medicine, Royal College of Physicians, London. Second Revised Edition. Crown Octavo, 342 pages, Extra Cloth. Price, \$2.00, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

The Lectures on Auto-intoxication, by Professor Bouchard, one of the greatest authorities on this subject on the continent, are here translated by Dr. Thomas Oliver, of the University of Durham. This edition is a revision of the original, with additions and revision by the translator, with the consent of the author. All additions by the translator are enclosed in brackets. The subject matter is very timely, especially in

the last few years, when more attention has been paid to auto-intoxication in disease. It is well handled, pleasantly and clearly written, and each chapter is preceded by a full synopsis, so that one may easily find any fact that he is looking up. The book contains, among others, chapters on the toxicity of urines, intestinal antiseptics, pathogenesis of uraemia, typhoid fever, jaundice and cholera; also an appendix containing a chapter on the "Natural Defenses of the Organism Against Disease." The book is a valuable one and deserves a wide circulation.

**SHURLEY'S LARYNGOLOGY.** A Treatise on the Diseases of the Nose and Throat for Student and Practitioner of Medicine. By E. L. Shurley, Vice-President and Professor of Laryngology and Clinical Medicine, Detroit College of Medicine, etc. New (2nd) Edition, revised. 225 illustrations in the text, and six plates in color.

This book is well known and deservedly a favorite of all who read it. The additional matter and thorough revision of the book has resulted in a Treatise on the Nose and Throat, which is one of the most complete and reliable a student or practitioner could have for his library.

**A TEXT-BOOK OF PHYSIOLOGY: for Medical Students and Physicians.** By William H. Howell, Ph. D., M. D., LL. D., Professor of Physiology, Johns Hopkins University, Baltimore. Octavo volume of 905 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, \$4.00 net; half morocco, \$5.00 net.

Dr. Howell's many years of experience as a teacher of physiology in several of the leading medical schools is evident throughout the entire work in the simple and clear style and in the practical handling of his subject. The author has laid main emphasis upon those facts and views which will be directly helpful in the study of general pathology and in the practical branches of medicine. At the same time, however, we are gratified to see that Dr. Howell has not ignored the experimental side of the subject. This we consider very important, for it has been through individual research that all the great advances in physiologic knowledge have been made. The entire literature of physiology has been thoroughly digested and the important views and conclusions incorporated. Indeed, the author has prepared a text-book which, while preserving the scientific spirit, is at the same time simple and modern in presentation. Every notable advance in physics or chemistry as influencing physiology has been carefully noted. Illustrations have been most freely used, greatly helping in understanding and supplementing the descriptions in the text. Especially valuable are those illustrations employed to make clear the more



intricate anatomic and physiologic mechanisms. Altogether, we consider it a very valuable book, because it is accurate, up to date, and highly practical.

A **MANUAL OF DISEASES OF INFANTS AND CHILDREN.** By John Ruhräh, M. D., Clinical Professor of Diseases of Children, College of Physicians and Surgeons, Baltimore. 12mo volume of 404 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Company, 1905. Flexible leather, \$2.00 net.

Dr. Ruhräh is to be congratulated upon the production of a manual that presents the subject of pediatrics in such a clear yet concise manner. He has outlined the therapeutics of infancy and childhood in a way that cannot fail to make for this work a place of first importance in its field. He has given explicit instructions for dosage and prescribing, and a number of useful prescriptions are appended. Infant feeding is given in detail. All the illustrations are practical, and include three inserts. A very valuable feature consists in the many references to pediatric literature so selected as to be easily accessible by the student, enabling him to ascertain the sum of knowledge on any given disease. We give Dr. Ruhräh's work our unqualified recommendation.

A **TREATISE ON DIAGNOSTIC METHODS OF EXAMINATION.** By Prof. Dr. H. Sahli, of Bern. Edited, with additions, by Francis P. Kinnicutt, M. D., Professor of Clinical Medicine, Columbia University, N. Y.; and Nath'l Bowditch Potter, M. D., Visiting Physician to the City Hospital and to the French Hospital; and Consulting Physician to the Manhattan State Hospital, N. Y. Philadelphia and London: W. B. Saunders & Company, 1905. Octavo of 1008 pages, profusely illustrated. Cloth, \$6.50 net; half morocco, \$7.50 net.

We have been anxiously awaiting the publication of Dr. Sahli's great work in English. Its immediate success in Germany will certainly be repeated in this country, and the English-speaking profession owe to Messrs. W. B. Saunders & Company a debt of gratitude for their enterprise. Not only does the distinguished professor exhaustively consider all methods of examination for the purpose of diagnosis, but the explanations of clinical phenomena are given and discussed from physiologic as well as pathologic points of view, and with a thoroughness never before attempted in any clinical work. The examinations of the stomach, sputum, feces, urine, and blood are exhaustively treated. There is an article from the pen of Dr. Theodore C. Jane-way giving a brief review of the investigations of American and English observers upon the value of the clinical estimation of blood-pressure, with a description of some newly devised instruments. Some of the new features in the chapter on urine examination are: Seliwanow's reaction for levulose. Bial's test for pentoses, and quantitative determination of urochrome after Klemperer. Osmotic pressure and cryoscopy of the urine are also discussed at length, and a description is given of Liebermann and Posner's method of staining urinary pigments. In the chemical examination much attention is directed to describing methods; and this is done so exactly that it is possible for the clinician to work according to these directions. The nervous system has been

very elaborately detailed, giving unusual space to electrical examination. Indeed, the American edition of this great work contains all the material of the new fourth German edition, with which it simultaneously appeared. Many new illustrations have been added by the editors. The work is indispensable to the practitioner.

A **TREATISE ON DISEASES OF THE SKIN.** New (4th) Edition, Revised. For the use of advanced Students and Practitioners. By Henry W. Stelwagon, M. D., Ph. D., Professor of Dermatology, Jefferson Medical College, Philadelphia; and Clinical Professor of Dermatology, Woman's Medical College, Philadelphia. Handsome octavo of 1135 pages, with 258 text-illustrations, and 32 full-page lithographic and half-tone plates. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, \$6.00 net; sheep or half morocco, \$7.00 net.

Four large editions of Dr. Stelwagon's work have been required in three years. Surely such a sale bespeaks a book of unusual merit. Notwithstanding the frequency of editions, Dr. Stelwagon has not lost this opportunity to bring his book up to the latest knowledge. The therapeutic use of the Rontgen rays, high-frequency current, and Finsen light have been accorded the increased attention their growing importance deserves. We notice the addition of new text-cuts, some thirty-eight in number, and six additional insert plates, all up to the high standard set by the text. The author, by the judicious elimination of redundant material, has kept the size of his book much as before, the increase being only some twenty pages. Indeed, it is remarkable the epigrammatic way that Dr. Stelwagon has of saying things—a style most desirable both in a text-book and a reference work for the busy practitioner.

**THE PHYSICIANS' VISITING LIST.** 1906. P. Blakiston Son & Co. Philadelphia, Publishers.

This is a very handy and convenient pocket visiting list, arranged so as to accommodate twenty-five names each week of the year. The little book also contains a calendar for 1906-1907, a table of incompatibility, a table of poisoning and the treatment, a dose table, and blank leaves for visiting list, memoranda, addresses of patients, nurses, accounts asked for obstetric engagements, vaccination, births, deaths, etc.

**THE PRINCIPLES AND PRACTICE OF MEDICINE,** Designed for the Use of Practitioners and Students of Medicine. By William Osler, M. D., F. R. S.; F. R. C. P. (London); Regius Professor of Medicine, Oxford University, Honorary Professor of Medicine, Johns Hopkins University, Baltimore; Formerly Professor of the Institutes of Medicine, McGill University, Montreal; and Professor of Clinical Medicine, University of Pennsylvania, Philadelphia. Sixth Edition, thoroughly revised, from new plates. D. Appleton & Company, New York and London, 1906.

This edition of Osler's Practice of Medicine being called for so soon after the last one speaks volumes for the value of the work. The book is so largely rewritten and revised that it is far better than even the last edition, and indeed it almost a new book. It still holds the front rank of text books on the practice of medicine, and testifies to the unusual ability and experience of the author. An eulogy, or even a review of the book, is not necessary, for there probably is not an English-speaking physician who has not heard of the work, and the large majority of the younger generation at any rate have used it as a text book in college and as a favorite reference book in practice.

## Progress of Medical Science.

### MEDICINE.

**Pneumonia in the Young.**—E. F. Wells, Chicago (*Journal A. M. A.*, October 14), points out that pneumonia is most frequent in early childhood, and next most frequent in full maturity from 30 to 50 years of age. He limits the term to pneumococcal infection and the fact that the pneumococcus is present in the mouths and upper respiratory passages of probably 50 per cent. of healthy persons accounts for the frequency of the disease. He has never failed to find the pneumococcus in several hundred examinations of persons who have had pneumonia. But he has not found it in recently born infants, which accounts for the infrequency of the disease in the very earliest periods of life. Once the throat becomes infected, however, the child is liable to pneumonia. The symptoms, high temperature, rapid pulse and breathing, pain, cough, the well-known expiratory grunt, the loss of appetite and the physical signs are described. The chill which is usually conspicuous in adults is absent in young infants and is infrequent in young children. The child is usually dull and apathetic, surface pallor is the rule. The duration of the disease is shorter in infants than in adults, and unless some complication like empyema intervenes, usually ends by crisis, or less frequently by lysis, in a week or more. Serious complications are more frequent in children. Serous pleurisy is less common than in adults. In case empyema intervenes, it is generally limited by adhesions, and if left alone usually evacuates itself into a bronchus or externally, and after a prolonged convalescence, complete or partial recovery occurs or the child may be worn out and die from exhaustion. These cases are usually recognizable, but, if in doubt, he advises using the exploring needle without hesitation. Other complications mentioned are otitis, with rare meningeal involvement, but usually recovery without impairment of hearing is the rule. Abscess, pericarditis, peritonitis, arthritis and endocarditis are rare. The prognosis of infantile pneumonia is unsettled by statistics, but Wells thinks that in private practice at least it is better than in the adult. The treatment necessarily must be more or less individual. The healthy child must be kept out of the way of the infected one. Exhaustion and too profound sleep must be guarded against in the infected child and the fluids of the body, whether intravascular or extravascular must be cleansed of the soluble toxins. Wells would give the child with pneumonia plenty of liquids to drink and, in addition, normal salt solution by rectum if necessary. Theoretically, this washes out the toxins. Practically, Wells employs and advises it. In his practice he gives moderately large doses of a reliable tincture of digitalis with the enemata if

they are retained. Other vaso-motor tonics may also be given. For high fever and restlessness, he prefers tepid sponging followed by alcohol, repeated as required. This failing, he uses guaia-col in suitable dosage to the thin skin of the flexures, supplemented by the ice cap at intervals. Oxygen inhalations are useful when the patient is not fretted by their use. Strychnia, aromatic spirits of ammonia, etc., may be used as required. In case of profound nervous failure with apathy, abdominal distension, etc., the little patient may be aroused by a stimulating glycerinated enema. The best medical attention and nursing and fresh air are required, and the child should be disturbed as little as possible. Complications should receive prompt and careful attention, and in those requiring it (especially if empyema be present, prompt surgical relief should be afforded.

**Essential and Paroxysmal Tachycardia.**—J. J. Morrissey says that tachycardia may be classed under two heads, namely, essential and paroxysmal, and this classification may be subdivided into true and false. The true tachycardia, according to the author, finds its best illustration in permanent disease of the cardiac musculature; the false may be produced by causes far removed from the heart. There are certain definite peculiarities which distinguish true tachycardia from the evanescent "heart hurry" so frequently produced by the most trivial causes. (1) The attack is sudden in its onset, reaching its height almost immediately; (2) the patient may or may not be entirely unconscious of the great degree of palpitation; (3) there is generally a definite period covered by the attack; (4) the reversion to the normal condition is as sudden as the onset, the vestiges of the storm through which the patient has passed rapidly disappearing. He then discusses the various forms of these types, and describes several cases which illustrate the differences in origin which may be exhibited. For example, one case was produced possibly by myocardial degeneration, and another by profound shock to the nervous system. In one case in which digitalis appeared to be of no avail, the fluid extract of *convallaria majalis* in five-drop doses, four times a day, seemed effective. He concludes by saying that the treatment of tachycardia is that of the condition from which it arises, or with which it is associated; but we must remember (1) that essential tachycardia is not accompanied with indigestion; (2) that paroxysmal tachycardia and the forms of tachycardia, accompanied by signs, no matter how slight, of Basedow's disease, are very frequently associated with dyspepsia; (3) that extreme cardiac arrhythmia frequently occurs without any indication of stomach disease, and (4) that tachycardia in its various grades is, however, often but a symptom, a prominent expression of a neuropathic state, which requires to be approached for treatment from many sides.—*Medical Record*, December 2, 1905.



## SURGERY.

**Transverse Incision in Abdominal Operations.**—A. E. Rockey speaks of the development of abdominal incisions which have been becoming shorter and shorter until now appendectomies are done through one-and-one-half-inch incisions. The transverse skin incision represents a further advance, for the cleavage lines of the skin of the lower abdomen are parallel to the wrinkles, being transverse with a slight downward curve. The transverse incision has already come into extensive use for cases in which the abdomen is to be opened in the median lines, but the author applies the same principle to operations on the appendix and cecum, to exploratory laparotomy on the right side, and to colostomy and resection of the colon on the left side. The operation for ordinary acute, unruptured appendicitis, or the interval operation, is done through a transverse incision, slightly less than one and one-half inches in length, crossing McBurney's point at its center. This incision should lay bare the aponeurosis of the external oblique. Narrow retractors should be used and the incision completed on McBurney's lines. The advantage of this incision is that it falls along structural lines in the skin. The fibers of the aponeurosis of the oblique may be readily separated to twice the length of the incision, thus giving easy access to the transversalis, which, being the heavier and deeper, is then in line with the external opening, thus giving a maximum exposure with a minimum incision. In this operation the peritoneum is incised transversely. In fat subjects a two-inch incision is necessary. When it is desirable to obtain more room, it may be done first by extending all incisions along the lines described. If a very large exposure is necessary, the superficial incision is extended to the median line and the incision in the oblique carried across the rectus. The sheath of the rectus is then incised along the outer side of the muscle, both above and below the transverse incision. This incision will give ample access to the parts in the most complicated cases of appendicitis, and through it resection of the cecum and anastomosis for malignant disease may be done. In the few cases where abdominal drainage is necessary it may be effected either at the point where all the incisions cross, or through a small slit in the aponeurosis of the external oblique, where the outer end of the cutaneous and deep muscular incisions overlies each other. Several cases are described in which difficult operations were done through this incision.—*Medical Record*, November 11, 1905.

**The Transplantation of Organs.**—Alexis Carrell, Chicago (*Journal A. M. A.*, November 25), after noticing former work in this line, reports progress in experiments by himself and Dr. Guthrie at the Hull Laboratory of the University of Chicago in the autotransplantation and homotransplantation of organs. At first difficulty was experienced in adapting the organs to the new blood supply by vascular anastomosis, but after a new method of suturing had been perfected, the operation became comparatively easy. A few of the results are given. The kidney has been transplanted into the cervical region of a dog and a comparative study of the urine from the transplanted and the intact kidneys made the third day after the operation. The heart of a dog has been transplanted on to the carotid and jugular of another dog. The heart was beating and the blood circulating through it. With Dr. Guthrie, he established an arterial circulation through the right inferior thyroid vein of a dog which had symmetrical hypertrophy of the thyroid glands. Marked changes occurred, and it thus appears that the reversal of the circulation in only one vein of a gland may alter the physiologic process. It is possible that we may thus add to our knowledge of the pancreas, spleen, etc. Carrell suggests that organ transplantation may become of importance in a clinical point of view; that perhaps myxedema, idiocy, etc., may be thus modified, and that even heteroplasty with organs of the higher apes may be of practicable advantage. Much more animal experimentation, however, will be required before the method can be utilized on man. While it is impossible to say yet what practical results will be obtained, he thinks it possible and even probable that it will open up new fields in therapeutics and biology.

**A Report of the Whitman Method of Treatment of Fracture of the Neck of the Femur.**—F. E. Aschcroft describes a successful application of the plan of treatment for this injury advocated by Dr. Royal Whitman of New York in the *Medical Record*, March 19, 1904. The essential features of the treatment consist in traction on the limb under anesthesia to reduce shortening, followed by abduction until the trochanter is in contact with the side of the pelvis so that upward displacement is impossible. The entire trunk and leg are then encased in a plaster dressing, which is cut away to the knee at the end of four weeks, and is entirely removed at the end of eight weeks, more or less. The author's patient sustained an intracapsular fracture of the neck of the right femur in addition to other injuries as the result of a mine accident, but by the Whitman treatment at the end of the eighth week he was able to cut down his own cast and move about on crutches. After a few weeks he discarded these for a cane, and now, four months after the accident, he has a scarcely perceptible limp, only slight pain at the knee, no appreciable shortening, and is back at his work in the mine as an able-bodied man.—*Medical Record*, October 21, 1905.



## GYNECOLOGY AND OBSTETRICS.

**Causes of Failure of Gynecologic Operations.**—Noticing the frequent failure of gynecologic operations to give complete relief, W. E. Ground, Superior, Wis. (*Journal A. M. A.*, November 11), discusses what he considers some of the more frequent causes of the failures. His observation has led him to believe that almost every woman during her confinement suffers injuries to the pelvic floor from which she does not recover, and that immediate suture of apparent lacerations does not restore pelvic support in the vast majority of cases. Only when there is full restoration of anatomic structures to their normal relations is the mischief rectified, and when this is not the case visceral ptoses and their manifold neurasthenic and other accompaniments of morbid symptoms are met. Uterine displacements are also attributed by him largely to this cause. When the uterus is infected, heavy and traumatized, and its pelvic floor support is diminished, all these conditions need to be remedied before complete relief is afforded. The perfectly healthy uterus rarely causes symptoms, whatever its position. He has seen many cases of retroversion in young women that never produced symptoms until after pelvic floor relaxation occurred, unless infected with the gonococcus or pregnancy occurred with its consequences. Another source of failure after gynecologic operations, he says, is the so-called conservative operations on the ovaries. The vast majority of destructive lesions of the ovaries arise from uterine infection and it is very much of a question, he says, whether, after a uterus once becomes thoroughly infected, it ever fully regains its normal condition. Hence, he thinks, physicians are more likely to conserve ovarian tissue by doing a supravaginal amputation of the uterus and removing the Fallopian tubes and the accompanying lymphatic trunks, than by doing conservative work on the ovaries and leaving the uterus. In cases of double salpingo-oophorectomy for septic conditions there is no question in his mind as to the propriety of also removing the uterus. Leaving a uterus, the source of infection, renders other measures of doubtful utility, and removing it permits cleaner work with fewer postoperative adhesions to cause trouble. It has been his practice for several years to remove it in these cases, and the results have been eminently satisfactory.

**Aseptic Management of the Umbilical Cord.**

—J. Thompson Schell (Philadelphia) advises the following method for aseptic management of the umbilical cord: As soon as the child is born

the umbilical cord is clamped with a hemostat about three inches from its abdominal attachment; another hemostat is then placed a short distance from the first one toward the placental end of the cord, and the cord is then cut between. The cord and abdominal wall immediately surrounding it are carefully washed in 1 to 4,000 mercuric chlorid solution. The hemostat is then grasped in the left hand, and a pair of scissors in the right hand follows the skin amniotic junction until this is severed completely in its entire circumference. Care must be taken not to cut too deeply, as the vessels of the cord are usually very close to the amniotic covering. So soon as the vessels have been exposed, the amniotic covering and the Wharton's jelly is stripped away in a direction from the abdominal walls and a ligature consisting of a piece of very fine (No. 0) sterile catgut is then thrown around the vessels, and the cord is severed close to the ligature. The stump is washed in mercuric chlorid solution, dried with a piece of sterile gauze, and dusted with any good antiseptic dusting powder. The baby should not be put in the tub for about a week, but should be given a lap bath; the stump must be washed frequently in a boric acid solution, and a small amount of dusting powder used with the usual sterile pad and the abdominal bandage.—*American Medicine*, December 2, 1905.

**The Corroding Action of the Ovum in Ectopic Pregnancy.**—J. Riddle Goffe, New York (*Journal A. M. A.*, Nov. 4), calls attention to recent researches that have demonstrated the destructive action of the impregnated ovum in its implantation on the uterine tissues. He utilizes this fact to explain certain cases in which, with the symptoms of ectopic pregnancy and the presence of more or less extensive pelvic hemorrhage, microscopic examination reveals no traces of the products of conception, or of the source of the bleeding. The effect of the corrosive action above mentioned, he says, is readily conceived in cases in which the implantation of the ovum is transferred from the uterus to the thin-walled Fallopian tube. While generally successfully accomplished, it must frequently happen that the corrosive process extends completely through the tubal wall or brings the intervillous spaces so near the surface that the blood pressure ruptures the peritoneum and causes serious hemorrhage. He gives an account of a case in which this seems to have occurred, and refers to another reported by Paul Zweifel, in which hemorrhage occurred eight days after the first omission of the menses and the ovum was found to have eroded completely through the tube and serosa into the peritoneal cavity. It would be a fair inference, he thinks, that when a woman has missed one menstrual period and is attacked with sharp hypogastric pain, collapse and vomiting, with marked feeble pulse, and without rise of temperature, that an erosion has occurred through a gravid tube, and the need of prompt operation should be at once suggested.

## SYPHILIS AND DERMATOLOGY.

**Maternal Syphilis.**—This, as it seems to him, somewhat neglected subject is discussed (*Journal A. M. A.*, October 7), by G. S. Whiteside, Portland, Ore., in a practical way. He thinks the condition is often only recognized by the development of the taint in the infant after birth, and that such cases may be troublesome to the physician. He insists on the importance of being on the outlook for syphilis in the presence of obscure symptoms. When diagnosed in the pregnant woman mercury should be given promptly and fearlessly to protect the child. After birth the physician should give the syphilitic infant every care and mercury, and the child should recover in a few months. After thorough treatment the late forms of hereditary syphilis are rare.

**Further Report of a Case of Primary Lupus Vulgaris of the Oropharynx and Nasopharynx Treated by X-Rays.**—H. S. Birkett refers to a case of this condition presented before the American Laryngological Association in 1904, and reported in the *Medical Record*, December 24, 1904. Examination of the patient in December, 1904, showed that the former lesions in the oropharynx, nasopharynx, and cartilaginous septum had remained healed, but the process had broken out in the epiglottis and lower pharynx. The X-ray treatment is being given as before with satisfactory results and the lesions have made good progress toward healing. The author also speaks of the satisfactory results obtained by the X-rays in a case of lupus of the nose, and recommends more extensive application of the method.—*Medical Record*, November 4, 1905.

**Heart Gummata.**—F. Goldfrank, New York (*Journal A. M. A.*, November 4), reports a case of gummata of the heart and kidneys in which autopsy was performed at the pathologic institute of the University of Prague. The patient, a woman, died suddenly. Besides extensive gummatous deposits in the left kidney, there was a very large growth nearly filling up the left ventricle and encroaching on the cavities of the left auricle and the right ventricle as well. The pathologic findings were typical gummata, as they are found elsewhere in the body, and while the presence of a large number of Langhans' giant cells, as in this case, has been claimed by some to be against a diagnosis of syphilis no other diagnosis was possible. The history revealed syphilis of over eight years duration and "heart disease" for at least a year. The patient has been rejected for life insurance on this account, but there had

apparently been no symptoms of the condition appreciable by her or those about her. There is no doubt that this disease of the heart was the cause of the sudden death. Goldfrank compares the case with others of heart syphilis, and recapitulates some of the facts and conclusions of Stockman, who studied and analyzed fifty-six cases.

**Mercury in Syphilis.**—Otto Lerch (New Orleans, La.) explains why mercury is more effective when given by inunction than other methods. By inunction it is absorbed by the lymphatics and comes in direct and immediate contact with the virus. Enlarged glands will yield to inunction after resisting every other treatment. Lesions of bloodvessels and viscera, of bones and of the nervous system follow the lymphadenitis. Enlarged glands are found early in the disease and they may be palpated when every other symptom has disappeared. They contain the virus and a late secondary infection may be explained originating from them when the resisting power of the organism is lowered. Deepseated glands cannot be inspected and it is therefore impossible to say when a patient is cured. Dr. Lerch urges that in tabes and paresis antiluetic treatment should be tried, as it is often impossible to make a positive diagnosis. A certain analogy between syphilis and tuberculosis has led him to give inunctions of iodoform in tuberculosis. He has had good results.—*American Medicine*, November 4, 1905.

**Purpura Haemorrhagica During Pregnancy.**—B. Van Sweringen (Ft. Wayne, Ind.) reports a case of purpura in a young woman of 25, which appeared in the fifth month of her first pregnancy. Hemorrhages occurred from the gums and nose, into the cellular tissue and skin, and appeared in the urine and vaginal discharge. From none of these localities was the bleeding very profuse or serious at any one time. Continuing, however, over a period of two or three weeks, considerable anemia was produced and the prognosis was rendered unfavorable because of the serious nature of the reported cases. Many of these show that premature labor occurs in those who develop purpura during pregnancy, and when this does supervene, death of the mother from hemorrhage generally follows. In Dr. Van Sweringen's case the hemorrhagic tendency subsided, the pregnancy went to term, the delivery was accomplished by forceps and was followed by no unusual hemorrhage, the puerperium being perfectly satisfactory. The treatment adopted consisted of rest in bed, 5 grain doses of calcium chlorid with 1 grain of extract of suprarenal gland every three hours and gelatin ad libitum. Several cervical cauterizations in the early months of pregnancy, done to relieve the severe nausea and vomiting, are looked upon as possible causes of the condition because of the purulent discharge which followed. Absorption of infectious material from the cauterized areas seems probable, although no leukocytosis was present. The case is cited to show that the prognosis of purpura may not be so bad as the literature of the subject indicates.—*American Medicine*, November 25, 1905.



## NEUROLOGY.

**Periodic Paralyses.**—G. E. Holtzapple, York, Pa. (*Journal A. M. A.*, October 21), refers to the literature of this subject and gives an interesting account of a family of which he had the record for four generations and had observed for 22 years. Seventeen of the members of this family had the typical periodic paralysis, six of them dying in an attack. A number of others were sufferers from migraine. The attacks were of the characteristic type, the severer ones involving all the muscles except those of the face, eyes, tongue, the organs of speech and deglutition, and the rectal and vesical sphincters. Others were more or less permanently crippled by the disease. The pathology of the condition is discussed, the author being inclined to consider it as a vasomotor neurosis affecting the blood supply of the anterior horns, which are supplied almost wholly by the anterior spinal artery. The slow progressive permanent paralysis which occurred late in life in two of the cases reported, he thinks is due to slow degeneration of these horns from the frequent disturbances of nutrition. The paralysis in these cases seems to him to be closely allied to the local paralysis accompanying migraine, and thinking that there might be an active toxin from the gastrointestinal tract at work he made careful urinary examinations in six of the paralytic cases, in three of those suffering from migraine, and in five of the healthy members of the family. The average quantity of urine voided in all and the average output of urinary solids appeared to be the same. There was, however, a noticeable difference in the urea elimination in the paralytic individuals and in these directly after the attacks. It appeared that these patients do not excrete the normal quantity of nitrogenous metabolic products. It will require further observations to determine the exact degree of relationship, if any, between the diminished urea excretion and the paralysis. With the idea that the attacks were due to a vasomotor spasm he resolved to try large doses of bromid, preferably of potassium, 5ss, with one or two grains of citrate of caffein repeated in one or two hours. This gave decided relief, and helped to abort the attacks; small doses were never tried.

**Speech Training as a Factor in the Development of the Feeble Mind.**—Hudson-Makuen (Philadelphia) says defective speech is both a physical and mental sign of feeble mindedness, but it is by no means a pathognomonic sign, and it may be a cause and not a result of feeble-mindedness. Reference is made to the case of a

boy who was thought to be feeble-minded, and who is now a successful business man, as a result of the removal of some mechanical obstructions to the normal development of the organs of speech and the correction by training of the faulty mental and speech habit. A child's educability depends more than anything else upon his desire to be educated. The desire to speak is inherent in every normal person, and if this desire is not gratified the desire to be educated will be diminished or blunted. Reports are given of five cases illustrating the difficulties of diagnosis and prognosis.—*American Medicine*, December 2, 1905.

**Defects of Will from a Medical Standpoint.**—H. T. Pershing, Denver, Colo. (*Journal A. M. A.*, October 28), defines volition practically as the idea of motion and locates its seat in the motor centers of the brain. The transformation of a sensation of motion into a memory and into the idea of its repetition and the cerebral mechanism involved is worked out by him in detail and practical deductions are drawn. The control of acts is best obtained, not by prohibitions that arouse the idea to be avoided, but rather by displacing it by something better. In hysterical paralysis, for example, the physicians should try to raise the emotional tone, then to excite the depressed sensory centers by electricity and passive motion, and then further to awaken the lost idea of motion by encouraging the patient to aid rhythmic passive motion by voluntary effort. The fundamental thing is to reawaken the lost sensations and ideas in the kinesthetic center. This is the main idea in his article, but he elaborates it to apply to the various neurasthenic defects of will, as well as to morbid impulses or obsessions which are to be combated, giving also in a suggestive way the general principles of treatment adapted to the several types of disordered volition.

**Pseudosclerosis (Diffuse Sclerosis).**—C. S. Potts and W. G. Spiller, Philadelphia (*Journal A. M. A.*, November 11), review the literature of the so-called pseudosclerosis of Westphal and report a case, with autopsy. They reproduce Franki-Hochwart's diagnostic comparison of the two types of pseudosclerosis and diffuse sclerosis and point out their clinical resemblance. Their pathologic similarity is even closer, as Dr. Spiller shows in his pathologic report, and remarks on the case. "It is evident," he says, "that sharp distinction between the findings of pseudosclerosis and those of diffuse sclerosis can not be made, and that the differences are probably chiefly in the degree of the alteration and not in the character of the alteration. The unusual firmness described in some of the cases of pseudosclerosis must be caused by a proliferation of the neuroglia, even though this proliferation can not be detected by the microscope." The case reported, he says, may be regarded as one of pseudosclerosis, or at least as a transitional form. The pathologic diagnosis was hardening of the brain and cord, chronic diffuse nephritis, gummata of the liver, acute serous pericarditis, and fibrinous pleurisy.



## GENITO-URINARY SURGERY.

**Hypospadias.**—J. Coplin Stinson, San Francisco (*Journal A. M. A.*, December 2), describes his method of operating for hypospadias anterior to the scrotum in the following steps: First, he performs an external perineal urethrotomy and inserts a large tube into the bladder so that all the urine will be drained away, permitting the later plastic operations to heal primarily. Next he corrects the incurvation by dissecting up the urethra and dividing all constricting fibrous bands by transverse incisions so as thoroughly to straighten the organ. The third step is to form a new urethra by taking flaps from the mucous membrane and submucous tissues of the glans, and if necessary from the skin and subcutaneous tissues also. To cover the raw surfaces thus left on the glans and body, the hood is utilized. Lastly, the hump and transverse constriction on the upper surface of the body is corrected by making an inch long incision backward through the skin and subcutaneous tissues in the median line. This incision is at right angles to the transverse one made in separating the hood and is made long enough so that when its angle is bisected it can be drawn forward and sutured in the same line and continuous with the stitching of the preputial or transverse incision. This eliminates the convexity by diminishing the antero-posterior measurement of the penis and overcomes the existing lateral constriction in this region by increasing the transverse measurement to the normal condition. Each of these steps is described in detail, and the advantages claimed are: the surgery is done at one sitting, and takes but a short time, healing is durable in two to four weeks, the new canal retains its normal caliber and its coverings remain in their new positions. The preliminary urethrotomy and bladder drainage allow the plastic surgery to heal without the least trouble and the results, Stinson claims, are better than those of any operation hitherto described. The deeper structures are sutured separately and accurately with buried absorbable sutures so as to get perfect union. Sterilized catgut is used for the buried sutures. A short account is given of the first operation thus performed and each step is illustrated.

**The Quick Curative Treatment of Gonorrhea.**—Frederick A. Lyons reports a series of 400 cases of acute gonorrhea treated by the quick curative method the last ten years, in 384 of which, that is, 95 per cent. of them, the disease was cured in six days, and in about 80 per cent. in twenty-four hours. This method was published by him ten years ago, and consists of injections into the urethra of one drachm and a half of solution of silver nitrate, at first in 4 per cent. strength, later in 2 per cent., and 1 per cent. strength. In most cases a single injection was sufficient. It produced little pain, and after it the gonococci had disappeared from the secretion. If they were still found the injection was repeated. When not cured by three injections the treatment was not continued. The method depends for its effect on the fact that early in the disease the gonococci lie entirely upon the outer layer of epithelial cells, multiplying on them, de-

stroying their vitality and causing them to exfoliate. At this stage the microscope shows many gonococci on the epithelial cells. There follows congestion, afflux of serum, exfoliation of all the epithelium until the subepithelial tissue is laid bare. There will now be in the discharge few epithelial cells and many pus cells. At this time the gonococci penetrate the connective tissue. As long as there appear under the microscope epithelial cells studded with gonococci, so long are the germs within reach of the germicide, and the case is amenable to quick treatment. The exfoliation of the epithelium caused by the silver nitrate only quickens the exfoliation produced by the disease and destroys the gonococci and does no harm.—*Medical Record*, November 4, 1905.

**Non-Gonorrheal Urethritis.**—Henry G. Spooner first sketches the history of the study of urethritis, which was formerly confused with syphilis, and later was thought to be invariably due to the presence of the gonococcus. Now it is recognized that other micro-organisms may give rise to urethritis, as has been shown by the experiments of Bockhart, Legrain, and others who inoculated the urethra with various pyogenic organisms and obtained positive results. Such cases are not as rare as is usually supposed in this country, and they require consideration at the hands of clinicians. As the causes that contribute to the production of urethritis are so numerous as to be beyond our comprehension, the author prefers a classification based upon the clinical conditions in which cases of non-gonorrheal urethritis have been observed and he suggests the following classification: (1) *Urethritis caused by external irritation*: Coitus, catheterism, ungratified erections (?), masturbation (?), medicated injections. (2) *Urethritis caused by internal irritation, mechanical, chemical, and tonic, of constitutional origin*: Food, drinks, drugs, gout (?), rheumatism (?), arthritis diathesis (?), diabetes (?), herpes, mumps (?), syphilis (?), tuberculosis, typhoid fever (?). After the urethra has been chronically inflamed by a previous gonorrhea, or by any other cause, indulgence in coitus renders the urethra more susceptible to germ invasion. From the clinical point of view differential diagnosis is impossible, but as a rule in non-gonorrheal urethritis the incubation period and the course are shorter and less painful than in the specific form. Non-gonorrheal urethritis of constitutional origin must be treated so as to remove the exciting cause. When due to pyogenic bacteria the treatment is the same as in gonorrheal urethritis. Some cases of aseptic urethritis of unknown origin are not influenced by any form of treatment. In conclusion the author says: (1) The presence of pyogenic bacteria is not sufficient to cause urethritis until the vitality of the epithelium is lowered. (2) There are two varieties of non-gonorrheal urethritis of primary origin, those caused by external irritation, those due to internal irritation, chemic or toxic. (3) No incontestible cases of urethritis caused by gout, rheumatism, the arthritic diathesis, diabetes or mumps are contained in the literature.—*Medical Record*, November 11, 1905.

## BACTERIOLOGY AND PATHOLOGY.

**Bilharzia (Schistosoma) Hematobium.**—Claude A. Smith (Atlanta, Ga.) reports seven cases found among the Boers and the South African negroes who were with the Boer War Spectacle at St. Louis during the World's Fair, and who also appeared in Atlanta during March of the present year. Out of 45 specimens of urine examined the eggs of the *Bilharzia hematobium* were found in seven. It was not possible to examine more than the 45 specimens on account of the short time the company remained in Atlanta, but many other members of the company gave histories indicating that they might harbor the parasite. The seven cases were apparently chronic, as microscopic inspection did not indicate the presence of any blood or blood clots in the urine. Dr. Smith directs attention to the fact that the eggs are more or less cylindric, one end being bluntly rounded, while the other runs to a point or "spine," and that the egg is not a flattened body as it appears to be when first viewed under the microscope. A description is given of the anatomy of the embryo and the hatching of the egg, the rupture of the shell apparently being due to the change in the specific gravity of the fluid surrounding the egg. In conclusion, the question is raised as to the advisability of permitting such a number of cases of this disease to drift about this country when there is uncertainty as to the possibility of contaminating our streams with this parasite, especially in view of the fact that we have no remedy for this disease.—*American Medicine*, October 14, 1905.

**Uncinariasis.**—Claude A. Smith, Atlanta, Ga. (*Journal A. M. A.*, October 14), reports the experiments made on a human being to confirm those of Loossas in demonstrating the possibility of hook-worm infection through the uninjured skin. The experiments were made with great care to avoid the objections made to those of Loossas that there was possible infection through other sources. He thinks, and his reports seem to justify it, that the experiments conclusively prove that general infection may take place through the uninjured integument. That this is the only route he does not say, but he believes it to be the mode of infection in the great majority of cases.

**The Pathology of Intestinal Amebiasis.**—In an elaborately illustrated article P. G. Wooley and W. E. Musgrave, of Manila (*Journal A. M. A.*, November 4), give the results of their studies of the pathology of amebic dysentery, describing their methods and findings in detail. They find that it is a peculiar ulcerative condition caused by

the *Amoeba coli* (Loesch), usually confined to the large intestine, and only rarely involving the ileum (7 in 200 cases) and the appendix (14 in 200 cases). Usually the entire bowel is affected (159 in 200 cases), though it may be limited to one or more portions, most commonly the cecum and ascending colon (23 in 200 cases). The ulcers show a tendency to be undermined, owing to lack of resistance of the submucous layer of the bowel. The organisms may enter the blood vessels very early in the disease and reach the submucosa without lesions of the muscularis mucosa. That it is a subacute inflammatory process is shown by the character of the exudate and infiltration, the early formation of granulation tissue, and the absence of leucocytic infiltration. Healing may be complete or there may persist a condition of chronic atrophic enteritis or chronic catarrh known as sprue or psilosis.

**Pathology and Etiology of Human Vaccinia.**—W. T. Howard (Cleveland, O.) reports the results of his experiments. He concludes that in human vaccinia, vesiculation is well-established by the end of the second day. The changes in the epidermis correspond closely to those of variola, but are more severe and rapidly destructive of epithelium. The changes in the corium are much more intense and persistent in vaccinia than in variola. The primary cytoplasmic stage of cytocytes variolae occurs in human vaccinia. This, and the intensity of lesion (owing probably to the greater number of organisms introduced in vaccination) mark the main differences between variola and vaccinia. Granted that the groups of cytoplasmic and intranuclear bodies described by Councilman and his coworkers, by Calkins, and by Howard and Perkins in the skin lesions of variola and vaccinia are parasites causing these diseases, it seems that certain lower animals have the property of inhibiting the development of the sexual cycle, but permit that of the asexual cycle, which is pathogenic for both man and these animals, and gives rise to an immunity in man which protects against both cycles.—*American Medicine*, November 11, 1905.

**Syncytioma Malignum.**—Laura House Branson, Iowa City, Iowa (*Journal A. M. A.*, December 2), reviews the literature, the nomenclature, pathology and histology, diagnosis, etc., of this type of morbid growth and reports a case occurring in a woman, aged 31, a primipara, whose husband was the subject of secondary syphilis. The other peculiarities of the case were severe headaches for two months preceding delivery, which occurred at the end of the eighth month, the well-marked growth of the tumor at that time and the pronounced dilatation of the pupils which suggested to the physician the possibility of a metastasis to the brain. The patient died the third day after delivery. Dr. Branson asks whether the syphilis of the husband could have had anything to do with the formation of the malignant neoplasm in the wife, and whether or not such a condition as syphilis could have so affected the maternal nourishment as to favor the growth without showing the actual manifestations of the disease.



## OPHTHALMOLOGY AND OTOTOLOGY.

**Methyl Alcohol Amblyopia.**—C. S. G. Nagel, San Francisco (*Journal A. M. A.*, November 18), believes that wood alcohol amblyopia sets in first through a defective local blood supply consequent on disturbances in the general circulation. The first symptoms are therefore due to what Graefe has described as ischemia of the retina, and it would be of great interest if contraction of the blood vessels could be ophthalmoscopically demonstrated during the attack. The later eventual attack of grave amblyopia Nagel attributes to the later cumulative action of the poison shown by Pohl. He has had the opportunity to follow up the later course of a case included in Buller and Wood's report (*The Journal*, October 1-29, 1904), and gives the history and treatment in detail. From his observation of the case he had become convinced that a simple glaucoma had developed. As the prognosis in the incipient cases is so bad, he would advise prompt iridectomy or at least keratotomy, to lower the intraocular pressure. He asks whether so-called simple glaucoma might not come about sometimes under normal intraocular pressure if the optic nerve or lamina cribrosa has lessened resistency. Settling this, he thinks, would help to clear up the vexed question concerning the therapeutic effect of operative measures in glaucoma simplex.

**Dionin.**—Although the general literature on dionin is enormous W. H. Snyder, Toledo, Ohio (*Journal A. M. A.*, November 18), says that he has been unable to find any reported experiments bearing on its action on tissues and cells, and cites his own, in which the drug was applied directly to the eye of a rabbit in larger quantities than would be required for an abnormal eye. Sections were made of the enucleated eye and the findings noted. He concludes that the action of dionin is purely local, its most marked effects are in eyeballs in which tension is increased, and he believes its entire action can be explained by saying it has some disassociating action on the intercellular cement substance, allowing a transudation of serum from a globe under pressure. Its analgesic effect is explainable by its lessening of tension and by the well known action of the derivatives of opium. He believes that it is only a lymph stimulant secondarily; after the edema the fluid is absorbed as lymph, as it would be in edema from any cause. He reports a case of complete absorption of the iris, lens and capsule under the use of dionin in a case of severe contusion of the eye without penetration. In iritis with adhesions and plus tension, it lessens the tension and permits absorption of the mydriatic with resulting relief of pain and dilation of the pupil. In corneal ulcers, especially of the peripheral type, the repair process begins as soon as the ulcer is cleared. The more recent the inflammation and the higher the tension the better the results from dionin according to Snyder's ex-

perience. In recent cases of corneal opacity he has had good results, but little or no benefit in old central opacities with low or normal tension. He has tried it in conjunctival hemorrhage without special success, the pressure element being evidently lacking. In beginning pannus, his experience has been more satisfactory than with any previous treatment, the lid of course being treated for the cause. In glaucoma he prefers dionin to eserine, relief from pain being marked, due, he thinks, to the mechanical relief from pressure. He early abandoned the use of solutions and now applies the powder directly to the cornea with better results. The article is illustrated.

**Melanotic Choroidal Sarcoma.**—L. H. Taylor, Wilkesbarre, Pa. (*Journal A. M. A.*, November 25), reports a case of melanosis of the choroid in which the diagnosis was made after pathologic examination. The patient did well for a few months after enucleation of the diseased eye, but succumbed within a year from sarcoma of the liver, the orbit remaining free from any return of the growth. He remarks that it is rather rare to see and to diagnose a case of pigmented sarcoma of the choroid and afterward to confirm the diagnosis by pathologic examination. Frequently, as in the case reported, the diagnosis has not been made until the eye has been enucleated on account of hemorrhagic glaucoma.

**The Treatment of Perforations of the Tympanic Membrane, with Especial Reference to the Use of Gutta-Percha Tissue.**—David G. Yates recommends the use of patches of rubber to be applied over the perforation, so as to make an air-tight joint, in the treatment of recent or long-standing cases of this injury. In applying a patch to the drum a piece of rubber is selected, which is twice the size of the hole to be covered. The canal and drum are thoroughly sterilized by syringing and mopping, and dried. If necessary, the edges of the perforation are pared or touched with nitrate of silver. The disc is carried into the drum by means of forceps or a cotton-tipped probe through a speculum, if small, without it if too large. It is then pushed into position and the edges pressed down firmly all around. No adhesive material is necessary. The rubber is most conveniently sterilized by keeping it in alcohol or other antiseptic for a few moments while other preparations are being made. The patch hastens the reparative process and at the same time effects an immediate improvement in the hearing. The author sums up the advantages of rubber tissue used in this way as follows: (1) It is convenient, easily sterilized and applied. (2) It is flexible, remains in place for a long time, and requires no adhesive material. (3) In large perforations it has the advantage over the various forms of artificial ear drums in not causing pain or irritation or setting up a discharge. It helps to heal at the same time that hearing is being improved. (4) Healing is rapid and the formation of scar tissue, which is likely later to give way or become the seat of calcareous deposits, is reduced to a minimum.—*Medical Record*, November 11, 1905.



## THERAPEUTICS AND PHARMACOLOGY.

**Scopolamin-Morphin Anesthesia.**—Alfred C. Wood (Philadelphia) epitomizes his personal experience with scopolamin-morphin anesthesia and a brief study of the subject as follows: It is capable, in many cases, of producing a satisfactory surgical narcosis lasting several hours. When successful, the patient avoids the anxiety of even alarm often felt, before taking ether, and the nausea, vomiting and depression following its administration. If it should partly or wholly fail to anesthetize the patient, the surgeon may use ether or chloroform, with the assurance that the effect will be more prompt and satisfactory than when either is administered alone. When used in conjunction with ether or chloroform, it has been especially satisfactory. The time required to induce anesthesia was lessened, relaxation promoted, the secretion of mucus in the respiratory tract prevented, and the quantity of anesthetic required greatly reduced. To induce full anesthesia in the average healthy adult, 0.0006 gm. (1-100 gr.) scopolamin and 0.01 gm. (1-6 gr.) morphin should be given hypodermically 2 or 2½ hours before operation, and a second similar dose an hour later. The dose should be considerably reduced in children, feeble patients, and in advanced age. Its use is contraindicated in acute affections of the pharynx and larynx; operations involving the mouth or air passages; edema of the lungs, and in cases in which capillary hemorrhage may be a troublesome factor. A few deaths have been ascribed to this anesthetic. Both scopolamin and morphin are powerful drugs, and prudence demands that they be used with caution. The safety and success of this method depend upon having pure and reliable drugs, accurate dosage, and perfectly fresh solutions.—*American Medicine*, November 11, 1905.

**The Vapor Method of Anesthesia.**—James Taylor Gwathmey describes a modification of the Braun and Harcourt inhalers which he says combines all their good features in such a way as to present an improvement on the instruments now in use. The apparatus is intended to be used with ether and chloroform administered with or without the admixture of oxygen, but ethyl chloride or nitrous oxide may also be used in inducing anesthesia. The author expresses himself strongly in favor of the combination of oxygen and chloroform given by the vapor method, and states that it has been proven to be safer than ether and air. Anesthesia with his inhaler is better than that induced by the drop method, as the concentration of the anesthetic

mixture is accurately controllable instead of being dependent on the patient's manner of breathing, and while the gas-ether sequence is the quickest and safest routine method of anesthetizing, it is unphysiological, and will probably be superseded by the vapor method, or some other, in the near future. The advantages claimed for the author's method in addition to the exact control of the anesthetic vapor and the ability to change from ether to chloroform instantly at will, are the ease and pleasantness of induction, and the fact that excitement is usually absent or is very slight, the breathing is regular and natural, the lid reflex is never entirely absent, the breathing and pulse are usually normal, the amount of anesthetic used is very small, after-effects are absent in most cases, the technique can be acquired more rapidly than with other methods, and a continual narcosis may be kept up without danger to the patient. The apparatus is illustrated and details of its application under varying conditions, particularly in surgery about the mouth, are given.—*Medical Record*, October 14, 1905.

**Alcohol as a Remedy in Disease.**—T. D. Crothers (Hartford, Conn.) says that although many of the exhaustive studies in the laboratory and experiments of alcohol on animal life conflict with clinical experience, all seem to agree that alcohol depresses and is an anesthetic in its action. Within the last few years alcohol has become less and less popular as a drug in public hospitals, and where used, has been chiefly for external applications. The theory that alcohol is useful as a tonic for worn out elderly persons is rapidly passing away. Nearly all the old people's homes and hospitals for the aged have abandoned the use of alcohol for this purpose. Although medical literature still contains references to its value as a drug, its use is advised very timidly, and with so many qualifications as to leave much doubt concerning its real value.—*American Medicine*, November 18, 1905.

**Value of Chloretone and Sulfonal in the Treatment of Insomnia.**—J. Sanderson Christison (Chicago) says chloretone appears to possess a special affinity for the brain. In doses of 2 to 3.23 gms. (30 to 50 grs.) it usually induces sleep within 30 minutes which lasts from 5 to 8 hours. Its best results are obtained in the insomnia of agitated, melancholia, epilepsy, neurasthenia, and maniacal attacks with motor excitement. As much as 7.78 gms. (120 grs.) have been taken within 24 hours and followed by recovery. Sulfonal is usually prompt and effective in nervous insomnia when given in doses of 1.3 to 2.6 gms. (20 to 40 grs.) in solution. It is generally considered a safe hypnotic while the bowels are kept free by aperients and the kidneys continue to act in a normal way: 3½ ounces have been taken at one dose and followed by recovery.—*American Medicine*, December 2, 1905.

## HYGIENE.

**Quarantine, the Delirium Ferox of American Sanitation.**—John S. Fulton (Baltimore, Md.) under this title discusses the "quarantine madness" prevalent in the Gulf States during the yellow fever epidemic. He believes that rational, uniform and effective inland quarantine such as can only be had through the medium of the Federal Government, would reduce to insignificant proportions or perhaps abolish forever the detention camp, cordon militaire, and other costly features of inland quarantine, and would concentrate the more intense activities on and immediately around the infected areas. A powerful arm of the Federal Government has already been authorized to render these services, and there is no field of practical work in which the Bureau of Public Health can win greater distinction than in the demonstration of definite and orderly procedures by which the spread of yellow fever can be closely limited, without seriously increasing the burdens of an infected locality.—*American Medicine*, October 14, 1905.

**Disinfection of Dwelling Houses and Bedding.**—A. H. Stewart (Philadelphia) has devised an apparatus for simple and effective disinfection of dwelling houses and bedding. The apparatus, an illustration of which accompanies the article, consists of a tank made of heavy brass, 18 inches high and 8 inches in diameter. A Boekel air-pump attached to the side furnishes the air pressure and in this position also prevents the squirting of formalin solution into the face of the operator. There is no rubber hose on the machine and no rubber gaskets; the rubber tubing generally used being supplanted by an ordinary gas bracket with two joints, which can be set in any position so that the operator can remain in an erect posture at all times. The stream of formalin is broken up by a whirling device at the extremity of the gas bracket. A continuous fine spray without the mixture of air can be easily thrown to a distance of 10 to 20 feet, allowing the operator to cover the surface of the room before the gas becomes unbearable. When loaded with two gallons of solution the weight of the machine is 25 pounds. About 500 square feet of surface can be gone over in three minutes. With a 5 per cent. solution of formaldehyd gas a series of 2,000 tests showed 97 per cent. of surface disinfection. The results were equally gratifying from a series of experiments to test the value of this method in the disinfection of bedding. Dr. Stewart has found after years of experimentation with formalin and formaldehyd

gas machines that the most effective way to kill germs is to apply a 20 per cent. solution of formaldehyd gas in water to every portion of the room. With this large evaporating surface the results are more encouraging and no secondary infections occur.—*American Medicine*, November 25, 1905.

**Report on the Yellow Fever in Cuba.**—Juan Guiteras (Havana, Cuba) relates the circumstances of the last days of the yellow fever in Havana. He uses the facts as argument in support of the view that the mosquito is the only means of transmission of the disease. As some doubt has been expressed by some as to the demonstrative value of the experimental cases produced by him at Las Animas Hospital, he shows that there could have been no other source for the infection than the experimental application of the infected mosquito. He relates further how the disease has been introduced several times into Cuba without its ever taking a foothold in that old home of the disease, though the Hospital Las Animas may be looked upon as a veritable powder magazine charged with explosives in the shape of accumulated fomites.—*American Medicine*, November 25, 1905.

**Cholera and Infected Water.**—The experience of American army surgeons during the Philippine cholera epidemic of 1902-3 is narrated by Dr. C. E. Woodruff, U. S. A. Plattsburg, N. Y. (*Journal A. M. A.*, October 14.) The epidemic was started in Manila by infected food, and was mainly confined in that city to contact or food infection, the water supply being guarded by the military authorities from the first. In the provinces, on the other hand, most of the bad epidemics were from the water supply and were characteristically formidable. The life of the spirillum in water is short, and this gives the rational basis for the management of an epidemic. Of course the dangers from foods and contact, and from convalescents, who may carry the active germs in them for weeks must be guarded against, but the main thing is to guard the water supply. Patients must be isolated, discharges disinfected, and quarantine enforced against infected localities as far as practicable. The main reliance must be on boiling the water, and the more completely this could be enforced, the more successful was the management of the epidemic in the Philippines. The ease of personal prophylaxis, Woodruff says, was comforting, to say the least. With the use of only boiled water or bottled fluids known to be sterile, and of cooked or canned foods from scalded dishes, there was not the slightest danger. As regards treatment, Woodruff says, nothing can be done during the acute stage more than to make the patient as comfortable as possible. If he survives this, the judicious use of food and stimulants may save life. Encouraging results have been obtained from serum experiments, and there is some hope for the future from these. As it is, there is little fear of a cholera epidemic in any country where sanitary measures can be properly and fully enforced.



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## Original Articles

### THE SIGNIFICANCE OF ITCHING AND AN ANALYSIS OF METHODS SUGGESTED FOR ITS RELIEF.\*

ANDREW P. BIDDLE,  
Detroit.

Probably in no other disease is a symptom so prominently associated with its varying intensity as is the sense of itching in diseases of the skin. It modifies not only the disease itself, but brings into play other active agents, and so pronounced is this factor that often but little hope of relieving the patient of his existing disease can be expected, unless the effort is aimed primarily at the relief of the itching. There is not one of us who is not called upon almost daily to give relief to the distress and yet how little understood is the manifestation. It is clearly a nervous disturbance; but what produces it and why the act of scratching gives relief are problems still difficult of solution. An analysis of the various senses would lead us to believe that it is *not* simply a disturbance of contact, an independent phenomenon, but a complex one, associated indefinitely with common sensation, with the tactile, muscular and pressure senses and the sense of temperature. It is a matter of common observa-

tion that the lightest touch of a feather or the lead of a pencil to sensitive parts will provoke an active itching when a heavier touch of lead would provoke coldness or pain.

Itching is common to most animals, most marked in the hairy and feathered, at times being apparently spontaneous and physiological, as witnessed in the scratching of the hen in her daily dirt bath and the relief felt in the scratching of the head when the slight seborrhoic scales are removed. Again it seems to be indispensably allied to the sense of tickling, picking, creeping, crawling; and yet the senses of smarting, burning, stinging, with which the sensation of itching is often associated, seem to be clearly painful sensations, sensations distinctly antipathetic, for painful sensations are usually aggravated by scratching. Itching carries a suggestion of something extraneous to the body, as if provoked by an external irritant; implies an element of objectivity; in a painful sensation the feeling is purely subjective. "The one is a longing desire to resist, the other the passive endurance of a penalty."

\*Read at the annual meeting of the Third Councilor District Medical Society, Battle Creek, October 18, 1905.



But it would seem that the sensation of itching must have to do with the free nerve terminals in the epidermis, as evidenced by the fact that itching occurs only when the epidermis is involved in the pathological process. Deep seated affections do not itch, only those the lesions of which are superficial; and diseases of the connective tissue do not itch, even though superficially located. Lupus, the sarcoma of the skin, the epithelioma do not itch, except the latter sometimes in the formation of the crust and in the process of repair. Mycosis fungoides, closely allied to the sarcoma, itches only in its early or eczematous stage, when the epidermis is involved.

In the erythematous, erysipelatous and phlegmonous inflammations the sensations are of a smarting, burning, aching character, *i.e.*, painful. Itching, if present, is due to secondary implications of the epidermis. In the papular affections, syphilis for example, which are characterized by infiltrations confined to the corium or papillary body, itching, if it occurs, is an accidental complication.

It would seem that the acuteness of the symptoms and the rapidity with which the changes occur intensify the degree of itching. When the development is slow and there is little disturbance of the nerve endings, as with the anomalies of growth, there is little or no itching. Note the slight itching of the psoriatic, and the intolerable itching of scabies, of pediculosis, of lichen planus and the scratched skin of some of the stages of eczema, in which the itching has been so intense that the nail has denuded the skin to the rete mucosum, has torn asunder the follicular prominences and the skin consists of a mass of excoriated, denuded, infiltrated tissue with secondary pustular forma-

tions, enlarged neighboring lymphatic glands, and, where the itching and inflammation have been of long standing, the skin is thickened and pigmented. Witness again the usual slight itching of some of the exanthemata and the intolerable and uncontrollable itching of some of the toxins.

But not always is the sensation resulting from scratching one of pain. The awakening of the aphrodisiac sense by the scratching of the scrotum, the mammary gland, the nipple, or the external auditory canal is familiar to us all.

Itching then may be only an annoying symptom of a disease of the skin, or, on the other hand, a sensory neurosis due to a direct or reflex irritation of any part of the nervous system from the center to the periphery without any appreciable change in the skin itself, though in both cases the involvement of the epithelial layer seems to be necessary. As examples of the former may be enumerated again the truly pruriginous affections as scabies, eczema, pediculosis, and lichen planus. Here the itching is usually limited to the area involved in the cutaneous lesion, as in the various parts affected by the eczema, by the acarus or by the pediculus; but not necessarily so, as often the itching is in a part remote from the outbreak.

Itching as the prominent and sometimes sole symptom may be general or local. If universal it is not usually present in all parts of the body at one time, but now here and now there. Often it is distinctly local as in itching of the anus, the scrotum or the vulva.

It is principally in the aged (pruritus senilis) that the itching is universal, and may be due to the inordinate dryness of the skin following the atrophy of the sebaceous and sweat glands, or to defective

elimination from kidney and other degenerations. In the middle aged it is often the accompaniment of jaundice, of dyspepsia, of the gouty state, of albuminuria and chronic Bright's disease, of lithæmia and rheumatism, of diabetes mellitus, of fermentative processes of the bowels, of ovarian and uterine diseases, of pelvic tumors and of pregnancy, and may often be due to a central disease and may accompany anxiety, mental troubles and depressing mental influences.

In children it is frequently observed that the ascarides in the rectum, tapeworms and lumbrici in the higher bowel, catarrh of the intestinal canal will cause itching of the anus.

Often the itching is a reflex phenomenon from an internal organ or from a mechanical or chemical irritant. Indigestion of certain foods and medicines, especially in the susceptible, even such everyday drinks as tea, coffee and alcohol, or such food as cheese, or medicines as mercury, belladonna, and especially opium, will cause an itching, the symmetrical distribution of which shows that the nerve centers are attacked. The common assumption, however, that in the toxemias, in icterus, uraemia, diabetes mellitus, or lithæmia the itching which occurs is due to the direct action of the toxic material circulating in the blood is not well established. Yet it may be that, as the skin is an emunctory organ, the toxic substances are eliminated through it and by their presence cause irritation of the skin.

The itching of hemorrhoids and of the genital region during pregnancy is due to the pressure of the blood in the engorged venous plexus, and a mechanical pressure is probably accountable for the itching at the end of the penis caused by a calculus or other irritant at the neck of

the bladder. Itching of the pudendum is often an early symptom of cancer of the uterus. Weather changes, exposure to cold or heat, the application of certain drugs and plants, the change of clothing, a change of posture from an upright to a recumbent position "(due to the alteration in the blood pressure in the direction of increased tension)" are often fruitful sources of itching.

#### TREATMENT.

A symptom occurring under such varying circumstances can have no specific for its relief and so probably in no other affection of the skin is the skill of the physician and his knowledge of general medicine put to so severe a test. Varied and indefinite as are the sources of itching, so uncertain and empirical are the remedies for its relief and as varied are their actions.

Whether the itching be merely a symptom of a cutaneous lesion or the only appreciable symptom referable to the skin, the aim of rational therapy must be to ascertain the true cause and to attempt its removal.

#### INTERNAL.

The internal treatment is dietetic as well as medicinal, for my own observation has taught me to heed the close relationship of itching to one's general health, to the character of the food taken and to the condition of the gastrointestinal tract. The dietary must be of the simplest character and of easy digestion. The usual avoidance of alcoholic drinks, etc., must be enforced; the bowels must be regulated by the use of the various laxatives and saline waters. To the rheumatic, to the icteric, to the dyspeptic, to her suffering from uterine or ovarian disease or disease of the kidney the ap-

propriate remedy must be applied; to the anæmic the judicious use of cod liver, iron, strychnine, and in the chronic state sometimes the use of arsenic.

We need hardly dwell on this further than to state that only in a few cases other than the acute should reliance be placed on strong sedatives or opiates, except that frequently in chronic urticaria and in the rashes of the diabetic relief is obtained by the use of codein.

Bulkley of New York has suggested the use of the tincture of *cannabis indica* in doses of five minims, increased to twenty or thirty minims three times a day, well diluted with water, which appears to act by diminishing cutaneous sensibility. He has used also with favor the tincture of gelsemium in doses of ten minims, repeated every half hour until one drachm has been administered or toxic symptoms have appeared. Hutchinson of London advocates the use of *vinum antimonium tart.* in five minim doses three times a day. Antipyrine and phenacetine are useful in selected cases.

#### EXTERNAL.

Much is expected of external treatment and much may be done, for, even where the cause cannot be influenced, temporary relief may be given, so that the patient refrains from scratching; secondary cutaneous complications are avoided and the irritated skin is given a much needed rest.

But here again there is no specific treatment. Certain remedies relieve the itching by the protection they give from the baneful influence of the air and temperature, others through a sedative action on the skin, including cutaneous anæsthesia, others by their astringency and still others by their stimulating and specific benumbing of the nerves.

So numerous are the remedies, however, that it will be impossible to review but a few of the principal ones:

Luke-warm and moderately hot baths diminish the irritability of the sensory nerves. In *pruritus senilis*, in *pruritus* connected with disease of the liver, in *pruritus hiemalis* the warm bath (94° F. to 98° F.) is often beneficial, especially before the application of antipruritic remedies, and, although water is contraindicated in almost every case of eczema, the addition of indifferent substances, such as starch, bran, oatmeal, cornmeal, flaxseed, soothes the excoriated skin. Vapor and turkish baths are not employed in diseases of the skin with much success, though hot and cold douches are often of use in the relief of itching of the anus. Very hot applications, as hot as can be borne, are effective in relieving some of the most obstinate forms of *pruritus*. This method is also successful in cases of eczema in which the skin is dry and thickened. The itching of acute eczema may generally be promptly relieved in this way, the relief often lasting for several hours. It is necessary, however, to dry the parts and to cover quickly with some proper protection after the hot application. In some cases alternate applications of hot and cold, each 15 seconds, repeating the alternations for a number of times, is more effective than the hot application alone.

Cold applications and cooling or evaporating lotions are in certain cases more effective than hot or alternate applications. This is especially the case where there is elevation of temperature either general or local.

Perhaps it is that the true pathological condition of the itching epidermis is little



understood, but it would seem that the human skin is uncertain in its response to the application of acids and alkalies. In the one a weak solution of any of the common acids gives relief, when to the other it produces an intolerable irritation; and to the latter perhaps the alkali solution offers relief, the soothing effects being due probably to some osmotic action.

Where an extensive surface is involved and a bath is required it can be made acid by the addition of

Ac. Nitrici Fort., f̄ss;  
Ac. Hydrochlor. Fort., f̄j;  
Aque, Cxxx (30 gallons);

and alkaline

Sodii Carbonatis, ̄ iij;  
Aque, cxxx.  
Potassii Carbonatis, ̄ iv;  
Sodii Carbonatis, ̄ iij;  
Sodii Biboratis, ̄ ij;  
Aque, (C.xxx);

with the addition of half a pound of starch.

The most frequently used, and the most successful of the antipruritics, due to their stimulating effect and to their specific benumbing of the nerves, are phenol, camphor and menthol, but much discrepancy exists as to the strength of the ingredients, especially as regards phenol. I never use it in greater proportions than five to ten minims to the ounce, but some advocate its use as high as 20% to 30%, sufficiently strong to benumb the parts. It may be incorporated in a lotion with water in the proportion of three drachms to the pint with an ounce of glycerine. Camphor is usually combined with phenol in the proportion of three to one by weight (camphor-phénique) or with chloral in equal proportions. Menthol is usually used in an ointment

base, or in olive oil, ten to fifty grains to the ounce.

In the astringent class may be found a weak solution of alum, of citric acid, and a solution of lead, especially the subacetate, two to three drachms to the pint; of dilute hydrocyanic acid, half to one drachm to the pint, or pyroliginous acid one to thirty.

In the disinfectant class the best preparation is tar, as found in the liquor carbonis detergens two drachms to eight ounces, or liquor picis alkalinus, or lysol, a drachm and a half to eight ounces, or naphthol.

For its purely anæsthetic effect cocaine is used, especially in pruritus vulvæ vel ani, but care should govern its use, for fear of establishing a deliterious habit after repeated applications.

For its analgesic effect resorcin is often used in solution, as are ichthyol and tamenol; and among other medicants are orthoform and a strong solution of the nitrate of silver, the latter applied with a brush, as in pruritus ani.

Most of the proprietary remedies depend for their efficiency upon phenol, menthol, camphor, resorcin, or a weak solution of tar.

Ointments and lotions are the most efficacious in the relief of itching. The efficiency of the ointment may be enhanced by incorporating either the peruvian balsam, glycerine, tincture of benzoin, olive or linseed oil, separately or in combination for their protective features.

The Roentgen rays and the high frequency current have here but a little field of usefulness, although I have seen relief follow repeated exposures in pruritus ani; but I have had no success whatsoever with the faradic or galvanic current.

In conclusion I would state it is my experience that in diseases of the skin we are tempted to employ too strong medications. The denuded skin like other organs of the body is very sensitive; and in a large majority of cases, especially in

the acute stages, soothing remedies only should be permitted. A mild disinfection and a continuous protection form the key to the successful external medication of cutaneous diseases, except those of a purely parasitic character.

### THE BUILDING OF A PHYSICIAN.\*

CHAS. H. LEWIS,

Jackson.

President Jackson Co. Medical Society.

Members of Jackson County Medical Society:

Ladies and Gentlemen—In discharging this, my last duty as your president, I ask you to accept my sincere thanks for your hearty co-operation throughout this most pleasant and harmonious year of the life of the Society.

"The thing that hath been, it is that which shall be, and there is no new thing under the sun;" for this reason I bring you no novel thoughts, but only the iteration of old ones. Some themes are ever timely, and there are truths which can hardly be too often repeated; in this class belongs everything which contributes toward increasing the excellence, and thus exalting the dignity of our profession.

Though the subject of preparation for the practice of medicine is, as a matter personal to us, in the nature of a back number, I feel that no apology is needed for presenting it to those who realize the almost irresponsible power over health and life possessed by the physician, and who, loving their profession, desire to see it pursuing a course which, like "the path of the just," "shineth more and more to the perfect day."

No organization for any purpose, can

long sustain a public estimation above the average reputation of its members; and the medical fraternity can hold a position of honor in the world corresponding with the nobility of its mission, only as a high standard of merit is upheld by its rank and file.

In the practice of medicine the highest success depends upon the possession of abilities many and varied, as may be seen by a partial review of the qualities which combine to constitute an all-round physician, and which must be diligently cultivated, both in the seed-time of preparation for practice and throughout the summer season of growing and ripening experience, if one would reap, in the autumn days of full maturity, a satisfying harvest; garnering not alone material products, but also the choice, though imponderable, fruits of respect, confidence and esteem, and the consciousness of having fought a good fight for the betterment of his fellowmen.

In some of these qualities it may be said that the physician "is born, not made," for there are certain innate gifts which peculiarly adapt their possessor for a doctor's life.

(a). Among these a very necessary one is the inheritance of a sound body, endowed with powers of endurance equal to the maintenance of health under unfavor-

\*Address of the retiring president of the Jackson County Medical Society, delivered at their annual meeting in Jackson, December, 1905.

able conditions. With the most favoring environment, in a city practice, the general practitioner is subjected to such loss of sleep and irregularity in eating as would give a layman a bad case of "nerves" and dyspepsia; and the country physician, in addition to these discomforts, must undergo much greater hardships, for he must daily drive long distances, in sunshine or storm, oppressed by heat and choked with dust, or freezing in bitter winter nights, now dragging through deep mud or drifting snow, then jolting over frozen hubs which rack every joint and muscle; bearing both bodily fatigue and brain fag. But, whether fresh or wearied, he must be ever alert, in command of all his faculties and having the details of his knowledge and skill in the most accessible brain cells and on his finger tips. The lawyer in court is free to consult authorities, having at hand as many volumes as he will, but what would be thought of a practitioner of medicine who carried about with him the text-books of his art, to which he must refer before prescribing or operating.

Self-denial is the rule of the physician's life, for he holds himself ever subject to the call of the suffering: as the old song has it,

"The doctor's styled a gentleman,  
But this, I hold, is humming,  
For, like a tavern waiting-man,  
To every call he's coming."

The quaint proverb, "keep thy shop, and thy shop will keep thee," applies to the doctor's shop; and, as he is never the master of his time, in order to properly keep his shop he must deny himself nearly all outside duties and privileges, for, even could he leave his work to others, the habit of doing so would soon

show that his shop would not keep him.

Devoting his life to a science and art than which no others are making more rapid advance, the physician must be, all his life, a diligent student if he would hold his place in the current of the stream of progress, and not be swept aside to circle in an eddy of obsolete routine; and the strain of this is increased by the fact that he can find but little time for systematic reading without trenching on his hours for rest.

(b). In mental characteristics the possession of natural talent has especial value, and fortunate is the one blessed with a genius which enables him to readily acquire such qualifications as these, viz.:

(1). A cool head in emergencies, which nothing can surprise into confusion.

(2). Resourcefulness in difficulties, with a confident bearing reassuring to patient and friends.

(3). The habit of minute and comprehensive observation.

(4). The educated touch for purposes of physical examination.

(5). Acuteness in noting symptoms, with clear perception to grasp their significance, and judgment to classify them according to their relative importance.

(6). Promptness of decision.

(7). A true eye and the sense of proportion.

(8). Mechanical skill and deftness in manipulation.

In addition to all this, the physician must be sustained by no little resiliency of body and buoyancy of spirit not to be unduly depressed by the physical strain of sleepless nights; the constant sense of responsibility; the minor notes of distress with which his ears are often filled, and



by the burdens which his heart cannot, for long, roll off, of anxiety for the priceless interests confided to his care; of compassion for sufferers whom his skill cannot cure, and of sympathy in bereavements which he is powerless to avert.

This natural adaptability, though not an absolute "*sine qua non*" of success, since its lack may be partially compensated for by practice, is yet a great help in acquiring the accomplishments which form the rounds of the ladder up which the man of medicine must climb. Whenever the name man is used, it is, of course, to be taken in its generic sense.

Physics is the synonym of natural philosophy, and so, by the derivation of his name the physician is a natural philosopher, or scientist; but by the title of doctor he is also a teacher, and in his dual capacity the administering of remedies falls far short of measuring the field of his activities. His advice and counsel are often the most needed and most useful part of his service, and it is his duty to dispense knowledge as well as medicine. He is expected, like the sun, to radiate light and warmth to dispel the gloom and chill of the sick-room, and by virtue of his office he may come into closer touch with those entrusting themselves to his care than any other can. The sick are like sensitive thermometers in discerning between a warm human interest and a cold self-love in their medical attendants.

By reason of the number and complication of the factors involved, such as mutually-modifying chemical and vital forces, active within the body but not cognizable by the senses; differing temperaments and degrees of susceptibility to both disease germs and remedies, and the invisible and intangible, but

very real influence of the mind over physical processes, medicine can never be reduced to an exact science, but must ever be largely empirical; hence the physician needs to be a profound student of both the lore of recorded experience and the book of natural phenomena. The technical acquirements which make him an efficient ally of Nature's restorative forces must be gathered over a large range, for he who covets the ability to diagnose obscure morbid conditions, reading the language of mutually-reacting physical reflexes and weighing mysterious reciprocal influences of body and mind; then to wisely select remedies, must reap in many fields, studying the situation and structure of parts (human anatomy); the mechanism and functions of organs (human physiology); the composition and changes of substances (chemistry); the nature of abnormal physical conditions (pathology) and deranged mental states (metaphysics), and last, but not least, the entire range of remedial agencies, medical and surgical. It is evident that the pursuit of such studies will be most advantageously made by those who have laid the broadest foundation, and reflection leads to the conclusion that there is scarcely a branch of knowledge, not strictly technical, that has not something to contribute to the building of this foundation.

The increase of knowledge in many lines creates a corresponding increase in the demands made upon the practitioner; in order to keep abreast of the times, he must know more and be able to do more, both in treating his patients and in the way of instruction in sanitation and the care of the sick. His field is a far larger one than formerly, and his equipment should be such as to meet the greater requirements.

Education consists less in the storing of knowledge than in the leading out of the powers of the mind, and the more educative training the medical student brings to his work, the more effectually can he utilize the advantages of the medical school. The wide culture desirable as a basis for great professional attainments can hardly be expected to result from the training of the public school alone. The school courses now carry the student much farther than in the old time, but, as I believe, at the expense of thorough grounding in elementary branches. I have known pupils in a country school who would have put to shame many high school scholars of today in an old-fashioned spelling-match or a competitive trial in arithmetic, geography and grammar. The latter have not been kept long enough upon the milk of knowledge before being fed upon it's strong meat; they have been made to grapple with the more difficult problems before the assimilating powers of the mind were sufficiently matured, and the consciousness sufficiently stored with initial truths to render their mastery easy. More has been undertaken than there has been time for, and the result has been crowding, with perhaps its train of over-taxing and impairment of power, a poor preparation for an advance into more difficult fields of labor.

By omitting from the high school grades the smattering afforded of branches which can be pursued with profit only as part of a longer course, filling the space with a better drill in groundwork, and interposing a college course between them and the medical school, extending the time by four years, the whole series would be made easier and more profitable. And it is my conviction that such

arrangement would result in an education of more real value to those who do not advance beyond the high school. To leave the high school at the age of eighteen, the literary college at twenty-two, and graduate in medicine at twenty-six is better than a course completed earlier. The scheme might then be made to include some form of mechanical training and a short business course, both manual dexterity and a general idea of business methods being of practical use to the physician. In truth, the training of the whole public school curriculum hardly more than suffices for learning how to study, for to become a student involves the formation of habits of correct observation; pains-taking research; discriminating analysis, and logical reasoning, habits which have no mushroom growth, but result only from long-continued labor.

The liberal education of college life, embracing, besides study, the rounding effect of rubbing shoulders, mentally, with one's equals; the inspiration of daily intercourse with men of advanced attainments; the stimulus of rivalry; the "esprit de corps" of loyal fellowship, and the mere living in an atmosphere where the chief business is the acquisition of knowledge will amply repay the cost, even if the student must labor with his hands in order to secure it.

Happily, the time has forever passed when the young man who had had only the advantages of the winter district school, and manual training only in the use of farming implements, and whose ambition to study medicine had perhaps been fired by the delusion that the doctor led an easy life, gaining big money and great respect just by driving good horses and visiting about the country, could en-

ter a medical school and, after two years of six months each, achieve his end. Fortunately too, the old-time medical college is only a memory, where, except for six weeks of dissecting, twelve weeks of laboratory work in inorganic chemistry, and a surgical clinic limited by both meagre material and the ignorance of aseptic methods, the teaching was all didactic, and much of it pretty dry at that; the college which sent out men accredited as surgeons who had no clinical knowledge of surgery, and as obstetricians who had never entered a lying-in room. But those schools were the best to be had in the then-existing state of medical knowledge, and were stepping-stones in the march of improvement; and their graduates have filled the fore-front of that march.

Having the option of different combinations of studies, the student may shape his course in college with reference to his future work. The study of physics and analytical chemistry may well be pursued in the literary course, liberating many hours in medical college for the prosecution of advanced technical work.

A good knowledge of one's mother-tongue is of the first importance and it would seem safe to assume that every one who had graduated from a recognized medical college would know how to use his own language in composition and writing; but the following from Dr. Henry Beates, Jr., president of the State Board of Medical Examiners for Pa., shows that such assumption is not always warranted. He says: "The law of Pa. requires the candidate for license to possess a competent common-school education; the diploma of a regularly incorporated medical college is also essen-

tial, and that the diploma is a guarantee of the genuineness of the medical college work is attested by its recognition as a credential by the medical council which grants to such candidate the right to be examined by the board. Let us see how conscientiously the medical college discharges its responsible duties." Two years after the law was in force a candidate presented to the medical council his credentials. These set forth, attested by college authority signature, that the candidate was of good moral character, proper age, possessed of adequate preliminary education, and sufficiently learned in medical science and its art, safely to engage in practice. To the question, "describe a complete physiological revolution of the heart," he answered: "The air entering the lungs cause the action of capillaries to propel the blood through the veins to the heart, through the ventricles to the auricle."

Another qualified candidate answered: "The auricles contract they first fill then have two sounds and one pause then the ventricles fill when the auricles contract then the auricles contract and empty into the aorta." (Not a punctuation mark in this answer.)

Q. "Describe the pathological changes in senile gangrene."

A. "In senile gangrene, the tissue undergo changes by the extravasation of leucocytes and cellular tissue change, which cause death to the part."

Q. "Summarize the function of sweating and explain the office of each physiological factor involved."

A. "The function of sweating are, the kidneys which carry of the sweat that is not gotten rid of through the skin the pores are also means of getting rid of



the sweat and it is also absorbed by the hair follicles."

Another medical graduate wrote: "Wen does the Bord meat and whare."

Q. "Name each anatomical structure involved and describe the changes occurring in tubercular arthritis."

A. "The lungs become involved when the tubule (tubercle?) is contracted it involves the spleen becomes congested, the liver being inflamed."

The physician needs a reading ability in modern foreign languages, since the medical literature found in them suffers loss in translation and, though we boast of the "universal yankee tongue," it is not yet the language of science and medicine. Still more, in my judgment, does the medical student need an intimate knowledge of the so-called dead languages, Latin and Greek. Their study supplies a valuable form of critical discipline, and because their roots largely underlie modern languages, and especially because from them is derived the major part of English technical terms, familiarity with them is of every-day practical use to the student of medicine. Many hard words in the text-books, which to one unversed in Latin and Greek are stumbling-blocks because, being strangers, they must be memorized and attached, like labels, to their respective objects, to the classical student suggest, by familiar sight or sound, their derivation and construction, and fix themselves in his mind by their adaptability to the things for which they stand.

Johns Hopkins and Harvard, I think, require for admission a degree in arts or sciences, and three or four schools demand the completion of the junior year in a literary college, but not in one decade, and perhaps not in several, will it

become practicable to establish this condition throughout the country. But all good work is, in a sense, foundation work, the structures reared by the artisans of one generation becoming the basis of those of the next. It seems reasonable to hope that the American Medical Association, the Association of American Medical Colleges and the American Academy of Medicine, all laboring in the interest of higher medical education, will, in time, secure the adoption of the requirement of a bachelor degree from a four-year college for admission to medical colleges; and in no way, as it seems to me, can they build better for the future glory of Medicine. At the same time, the personal influence of physicians can do much to create in aspirants for the degree of M. D. appreciation of and desire for the best preliminary education. The good of the people and the advancement of our order will be best promoted by the entrance, not so much of more as of better men into our already crowded ranks.

Dr. A. W. Alvord, in his address as president of our state society in 1900, said: "In order to be able successfully to cope with the enormous problems facing the profession for solution, every man entering upon the study of medicine should be already a mental athlete, made so by a thorough drill in a literary college."

I will also quote from a paper read by Prof. Vaughan of Michigan University before the American Academy of Medicine, and its discussion by Prof. Hall of Northwestern University and Prof. Dodson of Rush Medical College. Dr. Vaughan objects to the indiscriminate requirement of a degree of A. B. or B. S. because these degrees have not been

standardized and may mean much or little according to their source, but he is strenuous in demanding the equivalent of the best bachelor degrees for admission, and says: "The best students we have in our schools to-day are college graduates. If my own boys were to study medicine, I would put them through the literary college first."

Dr. Hall says: "Some of the best men who have finished their course at our institution, and who successfully met the ordeals imposed upon graduates in Chicago and other large metropolitan centers, viz., the competitive examinations for positions in hospitals, have been college graduates; . . . they are successful in practice and are forging ahead to-day at a very rapid and encouraging pace. There is no reason to doubt that they will reach a very high place in the medical profession."

Dr. Dodson says: "Culture is the main object. I believe that the average college graduate coming from a four-year school, with such a training in the modern languages and the sciences as is required by Rush Medical College for admission to advanced standing, will turn out a better man at the end of three years of medical training than the average student without such a preparation after five years in the medical school."

But no description of a physician is complete which does not take into account the soul of the man, and the moral fiber of the doctor is often tested. The typical physician is one who has a symmetrical development of his threefold nature. The requirement is not only "a sound mind in a sound body," but this plus a sound moral constitution. Since the body is the instrument of the mind and the mind is dominated by the will, in

an attempt to maintain *constructive* changes in a body and mind under the control of a will undergoing *destructive* metamorphosis the net result can be only degeneracy. No supernatural revelation is needed to show what observation teaches, viz., that, alike in matter, mind and morals, effect follows cause, and that the processes of life work upward toward higher forms; those of death downward toward chaos. The moral nature that pursues the downward course drags down with it the fine physique and the brilliant intellect. We all have seen sad illustrations of this truth in our profession. It is to be hoped that we are outliving the credulous age in which people clung to the drinking doctor, whenever they could catch him sober, through the silly notion that the vice of drunkenness was a mark of superlative ability.

But if the practice of the healing art be followed from purely mercenary motives, and reduced to an exclusively commercial basis, the high ideal is missed, the nobler ambitions having their wings clipped to conform their flight to a low aim.

Long before reaching the medical college the youth should have learned this lesson, viz., that doing right from principle, and being truthful, honorable and generous from the love of truth, honor and generosity, constitutes one of the soundest assets, and one which yields increasing dividends as life advances.

In practice as well as in sentiment, "it is more blessed to give than to receive," and if the good we might do to others be withheld through fear of self-improvement, we shall make ourselves, not richer, but poorer.

"There is that scattereth and yet increaseth," and large is the physician's op-

portunity to minister to his own growth by giving freely of the power for good that is in him to the necessities of his fellows. Having entrance through the doorway of suffering into the sanctuary of the heart, it is his to exert an influence for good over many lives; and he who

aspires, like Leigh Hunt's Abou ben Adhem, to be enrolled upon the angel's scroll "as one who loves his fellowmen, when again the angelic radiance shall reveal the names of those whom love of God hath blessed, shall there behold his own in lead of all the rest."

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### PUERPERAL SEPSIS.\*

WM. F. METCALF,  
Detroit.

Puerperal infection is wound infection and its prevention demands the most scrupulous care, according to well-known surgical principles; the exercise of such care must be unremitting from the beginning of labor to the end of the puerperium if we are to be certain of results. Vaginal examinations should be carried out only under the same aseptic conditions that would attend a major surgical operation or delivery itself. Bacteria to be sure may be already present in the genital tract, but, in the absence of the gonococcus, the presumption is against the operator who delivers a woman and later has a case of puerperal infection developing as a sequence. Normal vaginal secretion has been shown to be bactericidal, and, while we may reasonably suppose that there is a considerable variation in the degree of this power, yet it is sufficient to protect against any but a recent infection, where the ordinary pyogenic saprophytes are concerned. It is this normal protective function of the secretions which we should aim to conserve to the extent of avoiding the preliminary douche as a routine measure. Rather should such cleansing and anti-

septic means be carried on during the term of pregnancy if there is reason to suspect the presence of any dangerous infection, in order that the condition may be corrected before the onset of labor.

Of prime importance is the sterilization of the hands but of even more importance is it to keep them sterile. A thorough scrubbing or soaking in antiseptics will not protect against the contamination of a casual touch against the clothing or furniture or hangings, in many cases the examining hand cannot safely be allowed to come in contact with the bed-clothing, since among the less intelligent class such will not be provided in a sterile condition. The use of rubber gloves, if intelligently carried out, simplifies the matter of asepsis. They can be quickly changed if contaminated, or sterilized by boiling. But their use makes no less imperative the care in sterilization of the hands themselves, since any tear or prick might simply pour in the accumulated mass of infection if this caution were not observed. Again the too common custom of imagining that one has met the requirements if he has periodically dipped his hands into a bowl of a weak solution of bichloride of mercury or other antiseptic, even though there is again and again a breach of

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\*Read at the Annual Meeting of the Michigan State Medical Society at Petoskey, 1905.



asepsis meantime, cannot be too thoroughly deprecated. Such a burlesque will not much longer serve to deceive the intelligent patient even though it gives the doctor mental rest.

In the routine preparation of the patient for her labor, a general bath should be insisted upon, an enema should be given, and the vulva and adjacent parts thoroughly cleansed and disinfected, after which the vulva should be kept covered with a sterile towel. If there be found pus in the vagina or evidence of gonorrhœal infection, such as redness at the mouths of the vulvo-vaginal glands, and the time for delivery is at hand, the vagina should be thoroughly cleaned with soap and water and a douche of lysol solution. This antiseptic is preferred because it lubricates the mucous membranes rather than leaving them dry. Before the dilatation of the cervix is far advanced the bladder should be emptied and the vestibule finally cleansed. All the bedding and towels provided should have been made sterile and this cannot be depended upon if the physician has not given explicit directions previously in this regard.

When labor is over, perineal tears should be repaired; but it is not my opinion that the most satisfactory repair of the lacerations of the cervix can be effected until the process of involution is nearly or quite complete. A perineal dressing with T-bandage is applied. A vaginal douche is advisable in any case which has called for any kind of instrumental interference, especially where the perineum has been repaired. Ergot, given after the placenta has been expelled, is wise; it favors, by stimulating contraction, the closing of those avenues of absorption which in the presence of infec-

tion doubtless greatly increase the dangers.

All fever must be regarded as arising from infection unless otherwise accounted for. Absorption from the blood-clot may possibly cause elevation of temperature, but from such source this should subside within twenty-four hours. Malaria, in this connection, hardly needs a blood-examination to be excluded. Intestinal intoxication may be determined by the effect of a cathartic.

It being settled that infection is present, we must first detect its point of entrance; and in this effort we should proceed systematically. With the patient in a good light, first examine the vulva and perineum. If evidences of infection are found here, remove any stitches and open the tract freely; cleanse the infected area with soap and water or lysol solution and apply pure carbolic, following this after thirty or forty seconds with a free mopping with alcohol. It will now be safe, after irrigating the vagina, to proceed with the examination of the upper tract. A speculum should be used to see if the infection has entered the cervix. The fingers of the gloved, thoroughly sterilized hand may now be passed into the uterine cavity and any clots or retained secundines completely removed. The entire uterine cavity can thus be explored by pressing the fundus of the uterus with the other hand. Besides noting the contents of the uterine cavity, observe the degree of contractility of the uterine walls. If there has been found no infection in the perineum but much debris in the uterine canal, the removal of which is followed by free flowing and firm uterine contraction, little anxiety need be felt. You are probably dealing with a case of sapremia. The cavity may now be

douched with sterile normal saline solution or one of lysol, 1:250, to clear out the small remaining fragments of debris.

If the condition of sapremia has existed for several days, there may have been engrafted the added infection of the colon bacillus or a staphylococcus pyogenes. Then the flow will not be so free, because there exists an endometritis, the uterine cavity being lined by a surface layer of necrotic tissue, which is filled with bacteria and beneath which is a protective layer infiltrated with leucocytes. If such a condition exist, the evidences will have been observed in the lower tract, either in the cervix or in the perineum. In this class of cases it is proper to use the same methods of treatment as were recommended for the infected perineum. After irrigating the cavity with saline, iodine, or lysol solution, pure carbolic acid or carbolic acid with iodine should be freshly applied to the whole endometrium. The excess of the solution may be neutralized by the subsequent application of alcohol. Following this the cavity should be loosely packed with iodoform gauze. It will be noted that among the substances advised for solution in the irrigating fluid no mention is made of the bichloride of mercury. If this substance is used it should be dissolved in the normal saline solution, as otherwise it merely coagulates the mucous if it is present in sufficient strength to have any action at all.

If in contrast to the above described condition the inner surface of the uterus is found comparatively smooth, the cavity empty, the flow scanty, and the uterine muscle toneless, you are dealing with a case of septicæmia, probably of virulent streptococcic origin. In such cases the protective wall is absent; the

germ and its toxic products travel along the lymph and venous channels toward the broad ligament, the ovaries, and peritoneum, and even into the vascular structures of the lower extremity. Infected thrombi are the result, and emboli becoming dislodged find their way to distant organs and establish new foci of supuration, when we may properly speak of the case as one of pyæmia. In the true septicæmia we are to conceive of the infection as not only freely circulating in the blood-stream but also as having so far overcome the body resistance as to be actively multiplying itself and as a natural result to be pouring out the poisonous bye-products of its own metabolism. The picture presented will vary of course with the degree of resistance of the patient, no less certainly than with the character and the virulence of the invading organism; and mixed infection will naturally complicate the condition.

The purpose of curetting, as well as its limitations, becomes evident in the light of these considerations. In the case of an infection by the streptococcus pyogenes, there is little hope of reaching and eradicating it in any thorough manner by this means but in many cases there will be found clots and other debris which if left would furnish pabulum for the growth and development of added virulence, and it is imperative that such debris be removed. This cleansing of the cavity can in most cases be effected without undue violence to the protective agencies themselves and in a perfectly satisfactory manner with the unaided finger followed by the antiseptic and cleansing measures above described.

What has just been said applies to the infections attending labor at full term. In early abortions forceps or the curette



may have to be used because of the more tightly adherent character of the secundines, and the smaller size of the canal. After the cleansing process is complete, apply antiseptics and pack with iodoform as in the ordinary case.

These manipulations will, in the majority of cases, be followed by a severe chill and subsequent higher temperature owing to the temporary increase of absorption and the rising of the body forces to meet the emergency, but a change for the better should be evident within the next few hours if the measures inaugurated are to be accounted successful. If the drainage continues to be free and the patient improving, the gauze may be left in the uterine cavity for forty-eight hours. Usually by this time it ceases to be a drain because the interstices will have been filled with fibrin, leucocytes, and tissue debris.

If the patient's condition is not markedly improved within twenty-four hours, I remove the gauze; if twelve hours later, the patient is not better, I again irrigate, disinfect, and pack the uterus, and *open the posterior cul-de-sac of Douglas* by a free incision extending nearly from one uterine artery to the other. I then pack iodoform gauze behind both broad ligaments, loosely filling the pelvic cavity.

If I have not seen the case from the first and have reason to think that the lymphatics are extensively involved, I open the cul-de-sac at the first disinfection. Not doing an obstetrical practice myself, most of the cases which I see come under observation at an advanced stage and there is sufficient urgency to demand the radical treatment without delay. The free incision and packing with gauze drains, the lymphatics coming from the infected area, thus protecting the general circulation from a large

measure of toxic absorption. The gauze may be removed from the uterine cavity at the end of twenty-four hours, but that in the cul-de-sac may be left for three or four days or even longer as indicated by the freedom of drainage and the course of the temperature. Twenty-four hours after the removal of the packing from the cul-de-sac, the pelvic cavity and vagina should be irrigated with sterile saline solution, and this irrigation should be repeated frequently enough to prevent absorption from any poorly drained pus-pockets.

If this line of treatment were carefully followed in all cases, I believe there would be few deaths from puerperal infection. Such cases require careful watching; secondary pus-pockets should be promptly opened; pericarditis and endocarditis must be anticipated and suitable treatment early inaugurated; the bladder must be watched to avoid retention; and restlessness should be controlled by the ice-bag applied to the head or tepid sponging or wrapping the patient in tepid sheets. This latter treatment controls the nervous symptoms and at the same time lowers the temperature more effectually and more safely than coal-tar antipyretics. In these cases I never use the latter, but one drug which seems to me of some value in this connection is quinine. Probably by its antiseptic action as well by its check upon dissipation of energy by metabolic excess, its use finds its justification. No medication that disturbs the digestive functions should be considered. Careful feeding and stimulation are most important, and elimination must not be forgotten. Frequent nourishment with easily digested food taken by the stomach and with predigested food by the rectum should be



supplemented by plenty of pure fresh water by the mouth and normal saline fluid by the rectum or injected subcutaneously. Strychnine and whisky find their place as indicated. If there be suppression or marked diminution of urine, the indications are for dry-cupping and the application of heat over the kidneys, the administration of digitalis, and caffeine or diuretin, besides subcutaneous saline infusion.

I have in many cases watched the effect of the antistreptococcic serum but must confess that I cannot recall a case where good effects could be definitely ascribed to it. On the contrary I have observed no ill-effect and so have occasionally permitted its administration because the family physician's faith in its efficacy was

greater than my own. This has given me the advantage of opportunity for observation which on my own initiative I would not have had.

Crede ointment, protonuclein, and the intravenous injection of silver nitrate with the purpose of increasing the leucocytes are measures which look reasonable but of which I cannot speak from sufficient experience to warrant a positive statement.

Of the more radical surgical interference, involving the actual sacrifice of the pelvic organs, I feel that I can speak with assurance born of a considerable experience. I now feel that under the treatment above outlined practically very few cases will be encountered in which the prognosis will not be as favorable without hysterectomy as with it.

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## INFLAMMATION.\*

I. N. BRAINARD,  
Alma.

This word comes from *inflammo*, "to set on fire;" and is used to mean "a disturbance of nutrition in the tissues of a part of the body, characterized by prolonged hyperæmia, the emigration of leucocytes through the vessel-walls, the transudation of plasma and lymph, and general proliferation in the area involved."—Wyeth.

In order to get a perfectly clear idea of what inflammation is and what it is not, let me introduce another term and discuss it along side of inflammation, viz., congestion. Congestion is defined as "the excessive accumulation of blood in a part."—Dorland. Blushing is an example. The cutaneous capillaries in the

cheeks dilate under some mental stimulus, and the blood rushes in. The hyperæmia while digesting food; of the brain during study; and of the gravid uterus are other examples. Congestion may be either physiological or pathological.

*Physiological* congestion is always for some beneficent purpose, and never results in harm to the part congested. This is true in all of the examples given above. Even the hyperæmia of the conjunctiva when a foreign body enters therein, is at first physiological. The blood rushes to the eye to excite the lacrymal gland to an output of tears so abundant as to wash away the foreign body. Succeeding in this, the hyperæmia breaks up, and no harm is done; but failing in this, the hyperæmia continues and anatomical changes follow in the tissues. This is

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just the boundary line where congestion becomes inflammation.

*Pathological* congestion is a congestion which has no physiological purpose. It may be either active or passive. *Active* congestion is produced by increased cardiac action, throwing blood into a part faster than it can get out, as in side-ache from running, which is a congestion pain in the liver, if in the right side. Dyspnœa upon lying down is due to a transient plethora of the lung, brought about by the suddenly lessened resistance in the circulation. Dyspnœa may also be due to excessive heart-action, as in tachycardia.

*Passive* congestion results from an increased resistance to the circulation, as in pneumonia, cirrhosis of the liver, the shrunken kidney of Bright's disease, wasting of the lung in consumption, a string around the finger. But these states are not inflammation.

Every inflammation is preceded by congestion. The small blood-vessels become engorged and blocked—the arterioles the most. The leucocytes, by their amœboid movements, escape from the blood-paths into the cellular spaces, choke up the tissues, and further interfere with the circulation. "Fluid elements rarely leave the blood vessels during active hyperæmia, but they occasionally do." (Da Costa.) "The wheals of urticaria are thus formed." (Warren.)

Some claim that the migration of the leucocytes is through open spaces in the endothelium of the blood-vessels. Others claim that there are no such spaces, but that the leucocytes pass through holes in the endothelium made for them by their own pressure. As soon as a part is through the rest crawls through by the amœboid powers of the cell.

The blood-current is slowed by all this outside pressure. The red-cells, which glide the easier, seek the middle of the stream, while the white-cells stick to the walls, and finally stop the flow wholly. Diapedesis then ends.

There appears to be a force known as "chemiotaxis" which attracts the white-cells to the seat of injured tissues. They may also be repelled by very virulent organisms. They hurry to the injured region to carry materials for repair, or to wage war upon invading microbes if that be the cause. Even in the mildest inflammations some white-cells migrate; and in severe inflammations vast numbers pass out.

"Coincident with the clogging of the venules and the emigration of the leucocytes, by reason of the force of the heart's action, the plasma oozes through the walls of the blood-vessels, producing *active* œdema, and a little later pressure on the lymphatic vessels by the mass of newly formed cells causes a transudation of lymph—*passive* œdema—which, mingling with the escaped plasma, coagulates outside the vessels." (Wyeth.) This gives the hardness to an inflammatory swelling.

*The signs of inflammation* are heat, redness, swelling, pain and loss of function. The heat is due to the hyperæmia. A slight difference of temperature between the inflamed region and the surrounding parts can be detected with the hand, or with a surface thermometer. The temperature in the inflamed region is never higher than the general temperature of the body at the time, though hotter than the surrounding parts. Not every heat is inflammation, as will witness the blood in the hepatic vein, which sometimes reaches 107° F. in a perfectly healthy condition.

The *redness* is also due to the hyperæmia. A non-vascular part, as the cornea and cartilage can not get red. Adjacent parts get red, as the conjunctiva in keratitis. All vascular tissues become more or less red or otherwise discolored. Inflammation of the throat and skin produces scarlet discoloration; inflammation of the sclerotic coat of the eye and of the fibrous coat of muscles produces lilac or bluish discoloration; inflammation of the iris produces brick dust, grayish, or brown discoloration; erysipelas causes yellowish-red discoloration; secondary syphilis causes a copper-hued discoloration, and tonsillitis causes a livid discoloration. A tuberculous ulcer is of a purple hue on the edge. Gangrene is shown by a black discoloration. A scorbutic ulcer is surrounded by an area of violet color. (Da Costa.) Not every redness is inflammation, as blushing.

*Swelling* is due to the plethora, and to migration of leucocytes, and to cell-proliferation. It is most marked in the loose, cellular, tissues, as about the eyes, scrotum, vulva and glottis. When the effusion is fluid, the swelling is soft. When it is coagulated, the swelling is brawny. Swelling may do great harm. Occurring in the glottis, it may cause asphyxia. Occurring in the conjunctiva, it may cause sloughing of the cornea. Occurring in the prepuce, it may cause gangrene. But not every swelling is inflammation, as in dropsy of the legs. And inflammation may occur without swelling as in inflammation of bone.

*Pain* is a constant and conspicuous symptom. DaCosta's paragraph on this subject is so good I copy it entire. "It [the pain] is due to stretching of or pressure upon nerves from exudate; to irritation of nerves, or to inflammation of

the nerves themselves, producing cellular changes. Pain is associated with *tenderness* (pain on pressure), it is aggravated by motion and by a dependent position of the part, and it varies in degree and character. In serous membranes it is acute and lancinating, like dagger-thrusts; in connective tissue it is acute and throbbing; in large organs it is dull and heavy, in the bone it is gnawing or boring; in the skin and mucous membranes it is itching, burning, smarting or stinging; in the urethra it is scalding; in the testicle it is sickening or nauseating; in the teeth it is throbbing; and in inflammation under tense fascia it is pulsatile. Pain in inflammation after presenting itself in one form may change in character. If a pain becomes markedly throbbing, suppuration may be anticipated. Pain does not always occur at the seat of the trouble, but may be felt at some distant point. This is known as sympathetic pain, and means that a nervous communication exists between the inflamed part and a distant area, a nerve-trunk referring pain to its peripheral distribution. Tenderness, however, is detected at the seat of trouble." Not every pain, however, is inflammation, as neuralgia and colic. The cessation of pain often means gangrene."

*Disorder of function* is seen in inflammation of the eye, wherein oversensitiveness to light occurs; and in inflammation of the ear, when slight noises are painful. The disorders due to colitis, gastritis, cystitis, neuritis are all familiar examples. In dermatitis, sweating ceases. In nephritis, the secretion of urine is lessened or stopped. In myositis and arthritis, every movement hurts. Not every disturbance of function means inflammation, as witnesses the vomiting



after pounding the finger, and the cramps in hysterics.

"*Infective inflammations* are such as are set up by the introduction into the tissues of bacteria. Some of these are accompanied by suppuration, as those caused by the cocci; and some are not, as erysipelas, tetanus, hydrophobia, syphilis, diphtheria. In general, suppuration is the sign of bacterial infection. *Surgical* (septic or bacterial) pus does not coagulate. Pus-serum, although furnished from the vessels of the inflamed area, is prevented from coagulating by the liquefying action of *bacterial peptone*, a product of bacterial ferment and decomposition.

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"Certain sterilized chemical substances, as well as sterilized bacteria, will when injected into the tissues, cause inflammation and a liquefying of the exuded plasma, and connective and embryonic tissues with which they come in contact, and produce a creamy liquid which very closely resembles *true surgical pus*. The inflammatory process, however, is mild, and systemic infection does not occur. Surgical writers have termed this 'laboratory pus.' " (Wyeth).

*Constitutional Symptoms.*—Fever.—This is a constant symptom. "It arises, in non-septic cases, from the absorption of aseptic pyogenic exudate, and in microbial inflammations from absorption of pyogenic toxic products of bacterial origin.

"In strong and healthy persons this fever, when not septic, is characterized by a full and strong pulse, flushed face, coated tongue, dry skin, nausea, constipation, and probably by acute delirium. In broken-down and exhausted individuals an ordinary inflammation, and in any in-

dividual a bacterial inflammation may cause a fever with typhoid symptoms." (DaCosta.)

The blood of one suffering with an inflammatory fever shows some peculiarities. It clots more firmly when shed, and the coagulum sinks more readily. On the surface of the blood a layer of leucocytes forms in the liquor sanguinis, because these sink less rapidly than the fibrin and the rubrocytes. This constitutes the "buffy coat." Their numbers are greatly increased in inflammations in order the more successfully to wage their war against the bacteria and toxins.

*Results of Inflammation.*—The rapid transudation of serum through the capillary walls in such cutaneous inflammations as sunburns, steamburns, strong counter-irritation, etc., result in blisters. Other cutaneous irritations result in the transudation of lymph, as in the pock of variola, and still others in pustules and ulcers. Inflammations of mucous surfaces result in catarrhs and ulcers. Inflammations of serous surfaces result in the transudation of lymph and the formation of plastic adhesions. Inflammations about solutions of continuity in flesh result in the development of granulation tissue, the filling in of gaping wounds, and cicatrization. Solution of continuity in bone is followed by the escape of blood and lymph, and the formation of callus. Inflammations of synovial tissues result in ankylosis. Inflammation of nerve tissue ends in paralysis and atrophy. Other results of it are gangrene and necrosis.

So long as an inflamed surface is kept aseptic no suppuration follows, but infection taking place, suppuration follows. Often devitalized tissues in breaking down and liquefying produce an aseptic

fluid called "laboratory pus," free from bacteria and the power of infection. Many times I have opened such pockets of aseptic pus. I do not fear it. But often an interior pocket of pus is septic from the start, it having been incited by some bacterium floated in on the blood-stream or lymph-stream, or carried in by some missile. Pus in soft tissues is walled off by a host of leucocytes which, by the law of chemiotaxis, have rushed to the infected area, surrounded the offender, and engaged in their phagocytic warfare upon it. They plug the tissues full and make what is called the "pyogenic membrane"—reminder of a faulty conception.

*Treatment of Inflammation.*—The first thing to do is to remove the cause. "If this cause is a splinter in the part, take out the splinter; if it is a foreign body in the eye, remove the foreign body; if urine is extravasated, open and drain; take off pressure from a corn; pull out an ingrown nail, remove microbes from an infected area by exposing, irrigating and applying antiseptics.

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"*Rest.*—Physiological rest is of infinite importance, and is always indicated in acute inflammation. In the exercise of function, blood is taken to a part, and an existing inflammation is aggravated. Further, Billroth has pointed out, rest prevents the dissemination of infection, because motion exposes fresh surfaces to inoculation and breaks down protective barriers of leucocytes. Its principles were first studied by Hilton. The means of securing rest differ with the structure or the part diseased. When rest is used, do not apply it too long. *Rest in bed* diminishes the amount of blood sent to the inflamed part and lessens the force

of the circulation, hence it antagonizes stasis. It has been shown that the heart beats at least fifteen times per minute less when the patient is recumbent than when he is erect. The saving of strength and the benefit to the local condition are thus seen to be enormous. In fact, the heart saves at least 21,000 beats a day. In every severe inflammation insist on the patient going to bed.

"In *cerebral concussion* rest must be secured by quiet, by darkness, by the avoidance of stimulants and meat, by the application of ice to the head, and by the use of purgatives to prevent reflex disturbance and the circulation of poisons in the blood. In *inflamed joint* rest must be obtained by proper position, associated in many cases with the adjustment of splints or plaster of Paris, or the employment of extension. In *pleuritis* partial rest can be secured by strapping the affected side with adhesive plaster or by using a bandage or a binder to limit respiratory movements. In fractures nature procures rest by her splints—the callus—and the surgeon procures rest by his splints—firm dressings or extension. In *cancer of the rectum* and intractable rectitis, a colostomy secures rest for the inflamed and damaged bowel. In *enteritis* opium gives rest to the bowel by stopping peristalsis. In *cystitis* rest is obtained by the administration of opium and belladonna, which paralyze the muscular fibers of the bladder. The use of the catheter gives rest to the bladder by removing urine. A cystotomy allows complete rest by permitting the bladder to suspend its function as a reservoir of urine. In cystitis from *vesical calculus* rest is obtained by cutting or crushing the stone. In *inflamed mucous membrane* rest from the contact of irri-

tants is secured by touching the membrane with silver nitrate, which forms a protecting coat of coagulated albumen. Opening an *abscess* gives its walls rest from tension. In *inflammations of the eye* light must be excluded to obtain complete rest, but tolerably good rest is given in some cases by the use of glasses of a peacock-blue tint. In *aneurism* the operation of ligation cuts off the blood-current and gives rest to the sac. In *hernia* the operation gives rest from pressure." (DaCosta.)

An inflamed part should be elevated, if practicable, to drain away from the injured tissues. Blood-letting by punctures and scarifications is helpful. Leeching and cupping help. Tincture of iodine sometimes does much good. The actual

cautery sometimes gives brilliant results. Icthyol in 25 to 50% ointment is highly recommended. But better than everything else except rest is *cold*, this may be applied wet or dry—preferably dry. Do not continue it too long. Douche inflamed cavities with *hot* water. Hot fomentations and poultices often relieve colic or neuralgic pains.

Among the remedies indicated for the *general treatment*, we may mention aconite, veratrum and gelsemium as arterial sedatives, calomel and the salines for catharsis; Dover's powder, acetanilid, hot drinks and heat for diaphoresis; citrate of potash, sweet spirits of nitre and copious drafts of water for diuresis, and opium for pain. The various serums and antitoxins act by increasing the number of the leucocytes.

## DISORDERS FROM EYESTRAIN.\*

OVIDUS A. GRIFFIN,  
Ann Arbor.

Notwithstanding that much has been presented upon this subject, it is a lamentable fact that a large percentage of the medical profession fail to appreciate the nature and consequences of eye-strain. Thousands of patients are annually being subjected to a medicinal treatment of reflex disorders, arising from eye-strain, while the etiological ocular defect remains unappreciated by both the patient and his attending physician. Fortunately, this state of affairs does not obtain throughout the profession. Scattered here and there, like cases in a desert, are physicians who, having personally suffered (like the writer) from the tortures of ocular defects or intelli-

gently observed them among their clientele, are appreciative of their significance and rational treatment. When it is found upon investigation, however, that a large majority of text books and monographs upon internal and nervous disorders are silent as to the importance of eye-strain in the production of neuro-gastric diseases it is small wonder that the etiological ocular defect is so often unappreciated by the general practitioner in the treatment of these disorders.

The usual symptoms of eye-strain may, for the sake of brevity, be grouped under three headings. Phenomena of (a) muscular asthenopia, (b) conjunctival and retinal irritation, (c) defective vision. With the former condition, the patient complains of pain or pulling sensation within the orbital cavity, temporal or

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frontal regions, or within the eye-ball itself, which is due to an abnormal tension of either the extraocular or oiliary muscles or both. With irritation of the conjunctiva, however, the eye-ball and lids become injected, aggravating any existing acute or chronic inflammation of the lids, and attended with a hyperlachrymation which may be so pronounced as to stimulate epiphoria due to stenosis of the lachrymal duct. The symptoms of asthenopia, irritation, and blurring of vision may obtain constantly or only upon doing near work, but are usually accentuated by a close application of the eyes, e. g., sewing or reading. Aside from myopia, normality of sight does not exclude the existence of refractive errors, especially the more moderate degrees of hypermetropia and astigmatic conditions, particularly in the young who enjoy the necessary accommodative power to overcome the defect. With the advent of presbyopia, however, when the accommodation becomes physiologically reduced, the refractive error may become manifest with a lowered distant vision. So far as symptoms are concerned, furthermore, it is impossible to differentiate an imbalance of the extra-ocular muscles from an error of refraction, excepting when an extra-ocular muscle becomes so weakened that it can no longer cope with its opponent, when a diplopia occurs or it is corrected by an inclination of the head. Sensations of dizziness and nausea frequently obtain as a result of these conditions, although they may also be produced by astigmatic conditions, particularly when the axes exist at oblique angles.

The normal eye often tires with a physiological amount of work; but when a prolonged effort is made to employ a

defective visual apparatus, the task becomes not only unpleasant, but oftentimes distressing to a marked degree with more or less reflex disturbances, depending upon the nature and extent of the ocular defect, together with the systemic condition of the individual. Hence, a muscular or refractive defect which produces few or no symptoms in one instance may so affect the health of another person that a serious impairment of the vital functions occurs. The heart, which we are wont to regard as unceasing in its work, enjoys a longer period of rest than activity; but in instances of eyestrain, the correcting muscles are under a constant tension during all the hours of visual activity. So long as there obtains a sufficiency of reserve force to supply this continued expenditure of nervous energy, the symptoms are latent, but finally in many instances an exhaustion occurs, accompanied by manifestations of a varied symptomology.

It is to the importance of these systemic disturbances resulting from eye-strain, therefore, that I wish to specially direct your attention for a brief period. As previously indicated, these disorders are so varied, complex, and oftentimes pronounced that the symptoms of the causal ocular defect are quite unappreciated, in many instances, by both the patient and his attending physician, until by accident or design the etiological condition is recognized and corrected. Thus it is that the ophthalmologist frequently meets with instances of chronic headache, migraine, gastric disorders, neurasthenia, insomnia, epilepsy, chorea, and hysterical conditions which have resulted wholly from eye-strain and continued in spite of the medicinal treatment which has been so erroneously employed, but have ob-

tained permanent relief after the correction of an ocular defect.

To briefly illustrate the validity of my contentions in this direction, I beg to append a few characteristic instances of reflex disorders which have often been encountered in my practice as an ophthalmologist.

Case 1. Mrs. H. W. W., aged 35 years, presented the following history: Since childhood, she had suffered from nearly constant headaches and a nervous condition. Has employed the advice of several physicians but without relief. Finally concluded that trouble originated in eyes, inasmuch as near work increased her symptoms. Consulted a prominent oculist who gave her the following lenses for constant use: O. D.  $+ .50 + .25 \times 90$ , O. S.  $+ .75 \times 90$ . Obtained only partial improvement. Finally she consulted me when an examination of eyes revealed the following refractive condition: O. D.  $-.25 + .75 \times 90$ , O. S.  $-.37 + .88 \times 90$ . Since wearing this correction, she has enjoyed a complete cessation of headache and an improvement in general physical condition during the past two years without the use of internal medication.

Case 2. Miss G. M., aged 30 years, for several years has complained of constant and intense headaches, pain in eyes, and nervous symptoms. Had received medicinal treatment from several physicians without avail. An examination of eyes showed the following conditions: O. D.  $+ .50$ , O. S.  $+ .25 + .25 \times 90$ . Right hyperphoria, 2 degrees (tendency of right eye to turn upward). Glasses were prescribed to be worn constantly with which the muscular imbalance was corrected as well as the refractive defect. During the following year, she informed me that the former symptoms had entirely disap-

peared; but a year later, the symptoms began to return when an examination showed that the hyperphoria had increased to 4 degrees, for the permanent correction of which I advised a graduated tenotomy; but this was declined, so the former prismatic correction was increased to meet the condition, since which time she has not come under observation.

Case 3. Mr. P. B. J., aged 25 years, presented history as follows: Constant dull frontal and occipital headaches, pains within the orbits, loss in weight, and pronounced nervous symptoms which were increased by a prolonged use of the eyes. Riding upon the cars, attending the theater, or watching rapidly moving objects invariably increased the above symptoms, attended with a sensation of nausea. Had tried various general practitioners without permanent relief. Was wearing O. U.  $+ .50$  sph. An examination of eyes revealed the following conditions: O. U.  $+ .50 \times 90$ , and 12 degrees of esophoria (tendency of eyes to turn inward). Advised a tenotomy of both internal recti which was accordingly performed, leaving but 1 degree of imbalance. So great was the relief afforded by the operation and correction of astigmatism that the patient was enabled to follow with comfort his clerical work, and rapidly gained in vigor and weight, without the aid of medication.

Case 4. Mr. G. S. M., aged 31 years, consulted me, presenting the following history. Headaches, neurasthenia, marked insomnia, and gastric disorders. During the previous ten years, he had consulted several general practitioners and oculists regarding his condition; but had obtained no permanent improvement. To account for the symptoms, one physician informed him that he had "congestion of the



brain," while an equally mistaken prominent oculist corroborated this diagnosis because a "retinitis" was found to exist! Examination of his ocular condition revealed to me the following conditions: O. D. + .25 + .25  $\times$  90, O. S. + .50, and 18 degrees of esophoria. When I informed him that, in my opinion, his condition was due largely if not wholly to the imbalance of his extra-ocular muscles, he was astonished as none of his medical advisors had suspected or made a test for imbalance of his ocular muscles. I advised tenotomy of both internal recti which was performed. Although previous to the operation and wearing of correction for his refractive error he was particularly distressed by insomnia, during the past two years he has frequently expressed his gratitude for the great relief afforded him; and is now carrying on his multitudinous duties with satisfaction.

Case 5. Mrs. M. S. W., aged 35 years, presented the following history: Since childhood patient has been subject to periodical headaches which she regarded as hereditary inasmuch as her mother and an aunt had suffered similarly. During the past few years, she has complained of heart trouble, dyspepsia, marked constipation, and periods of extreme nervousness. While suffering from an attack of headache, an uncontrollable nausea and vomiting would occur which so exhausted her strength that she was often compelled to keep her bed for several days. Several physicians had been consulted regarding her condition, but no permanent relief was obtained. Finally her refractive symptoms became so evident that she was led to consult me regarding her ocular defect. Examination revealed the following facts: O. D. — 1.00 + 2.25  $\times$  60,

O. S.—.75 + 2.25  $\times$  120. Normal balance of extra-ocular muscles. The above correction was prescribed to be worn constantly. Although she experienced in the beginning some difficulty in wearing the glasses, she soon became accustomed to them, and although several years have elapsed since this defect was corrected, she has enjoyed a complete cessation of her former distressing symptoms.

Case 6. J. R., aged 43, presented the following history: During the past ten years, he has suffered frequently from periods of nervous exhaustion, gastric disorder, constipation, and a marked insomnia, which of late have become more pronounced in spite of the advice and treatment of several physicians. Being a man of broad scientific attainments, he had come to the conclusion that possibly his symptoms might originate from an eye-strain; and accordingly consulted me in regard to his condition. An examination of the eyes showed the following conditions: O. D. + 1.00 + .25  $\times$  180, O. S. + .75 + .25  $\times$  180, 1 and  $\frac{1}{2}$  degree of left hyperphoria and 2 degrees of exophoria (tendency of eye to turn upward and outward). Glasses were prescribed to be worn constantly, correcting both the refractive and hyperphoric conditions, while prismatic exercise was advised for improvement of the internal recti. A marked improvement in both the ocular and systemic disorders was obtained thereby, but a couple of months later, he again consulted me, stating that he was still conscious of some strain in the use of his eyes. A further test of his muscular condition revealed the fact that the hyperphoria had increased another degree while the exophoria had disappeared. Being persuaded that my patient was suffering from a latent hyperphoria,



I gradually increased the prismatic correction in his glasses until the imbalance became stationary at 4 degrees, when I advised a tenotomy of the left superior rectus to permanently correct the defect. At a subsequent date, the operation was performed, leaving only  $\frac{1}{2}$  degree of hyperphoria while the lateral recti were in balance. The cessation of his former systemic symptoms under this treatment was interesting and gratifying, both to the patient and myself. While previous to the correction of his ocular defect, he was confined strictly to a simple diet of bread and milk and suffered greatly from his insomnia, in the course of a few weeks he was able to relish an ordinary mixed meal, his bowels became more regular, the insomnia disappeared, and a rapid increase in weight was observed.

Case 7. Mr. H. M. G., aged 28, presented the following history: During the past ten years, he has been suffering from headaches, gastric disorder, and nervous symptoms. While in college some six years ago, his symptoms became so marked that he was compelled to abandon his work. He placed himself under the care of several physicians; but obtained no relief until by accident he learned from a fellow student who had had a similar experience that possibly his physical condition was due to an ocular defect. He accordingly consulted a prominent oculist who gave him for readingly only  $+1.00 + .50 \times 90$  from the use of which he obtained some relief. After wearing this correction for four years, he came under my care, when an examination of his eyes showed the following condition: O. D.  $+ .25 + 1.00 \times 90$ , O. S.  $+ .37 + 1.00 \times 90$ , and a slight exophoria (tendency of eyes to turn outward). He was instructed to

wear this correction constantly, since which time his symptoms have entirely disappeared as evidenced by his robust physical condition. No medication has been employed since wearing of glasses.

Case 8. C. A. H., aged 26, gave the following history: Previous to entering college, he had passed the greater part of his life in out-of-door pursuits, but during the past two years since devoting himself to study, his health has gradually failed until now he complains of a drawing sensation about his head, dizziness, gastric disorder, and a marked nervous condition. No definite refractive symptoms. Has consulted several physicians without obtaining permanent improvement. An examination of his eyes showed the following conditions: O. D.  $+ .25 + .62 \times 90$ , O. S.  $+ .25 + .50 \times 90$ , and 3 degrees of exophoria. Prescribed above glasses to be worn constantly in addition to which I advised the employment of prismatic exercise for the improvement of his weakened internal recti. Within one month, he had noticed a marked betterment in his physical condition which, without the use of internal remedies, continued to so improve that he was finally enabled to pursue his professional course of study with satisfaction.

Case 9. Miss E. S., aged 16, presented a history as follows: Since six years of age, has had indistinct vision for distance which has gradually become worse, attended with a rolling of eyes, twitching of lids, and spasmodic contortions of the face and shoulders. These have become so frequent and pronounced that she avoids society. Examination of the eyes revealed the following conditions: O. D.  $- 3.00 - 1.50 \times 180$ , O. S.  $- 3.00 - 2.00 \times 180$ , and 1 degree of left hyperphoria. She was instructed to wear the

above correction constantly in which the muscular imbalance was also remedied by decentration. In the course of year, without the use of any medication, the above symptoms had practically disappeared, she had markedly gained in weight, and considered herself cured. Two years later, however, she began to notice an irritation of the eyes, a blurring of distant vision, and some twitching about the eyes. Examination showed following conditions: O. D.—4.00—1.25  $\times$  180, O. S. — 4.00 — 2.25  $\times$  180, and 3 degrees of left hyperphoria, instead of as above. With the correction of these defects, the symptoms again disappeared in the course of a few months.

Case 10. Mr. C. L. C., aged 28, gave the following history: During the past five years, he had complained of pulling sensations in his eyes, feeling of constriction about the head, gastric disorder, and a marked nervous exhaustion which terminated in an acute attack of melancholia. During the past six months, he has been unable to use his eyes in reading. Examination of the ocular condition revealed the following: O. D. + 3.00 + .88  $\times$  90, O. S. + 2.00 + .75  $\times$  90, and 4 degrees of esophoria. A partial correction was prescribed for constant use, and gradually increased until he was able to employ the full correction. In the course of a few months, his former symptoms practically disappeared, and he was enabled to carry on his former occupation with satisfaction. Occasionally he would notice a return of some of his symptoms, but these were readily traced to a malposition of his lenses before the eyes.

In conclusion, I wish to emphasize the fact that the foregoing illustrative cases of eye-strain are not rare in occurrence

nor are the reported favorable results of ocular treatment exceptional, but are frequently being encountered and successfully treated by those ophthalmologists who are doing thorough, scientific, and conscientious refractive work. In contradistinction to these facts, however, I am sorry to admit that there is an alarming amount of humbuggery practiced in the "fitting of glasses." In making several thousand examinations of the eyes, I have found that over 90 per cent. of refractive errors are astigmatic, one quarter of a diopter or more, while 50 per cent. of the lenses prescribed from various sources are merely spherical. In other words, probably 75 per cent. of the glasses worn to-day do not accurately correct the ocular defects of the wearer, not taking into consideration muscular imbalances. When it is remembered, however, that the greater percentage of these glasses are nished by pseudo-specialists, "jewelers and opticians," "optical specialists," "doctors of optics," "optical companies" and quacks in general whose chief equipment consists of gross pretensions, aggressiveness, and the ubiquitous sign,

"EYES EXAMINED FREE,"

whereby the gullible and credulous are led to believe that they are getting something for nothing, it is small wonder, indeed, that the anticipated results of ocular treatment are so frequently unrealized, and that the uninformed laity and indiscriminating physician often confuse the claims of the ophthalmologist with those of the pseudo-specialist.

It is gratifying to note, however, that during the past few years an increasing interest and broader knowledge has been exhibited by the medical profession in the diagnosis and rational treatment of eye-strain. Even in the conservative medical centers of Europe, as I recently learned in an extended tour of her hospitals, considerable importance is being attached to ocular defects in the production of neuro-gastric disorders, but there is plenty of room for improvement in this direction, both at home and abroad.



## ECTOPIC PREGNANCY.\*

E. C. TAYLOR,  
Jackson.

I desire it to be understood in the beginning that I have no intention of presenting to this meeting a long winded text book essay on extra-uterine pregnancy, but to very briefly bring out some practical points on a condition with which I have been brought in close contact several times recently, and from which I believe I have gleaned some practical ideas and I expect some of you will take issue with me on my position.

There are some conditions incident to the details of the operation for extra-uterine pregnancy, which necessarily differs in technique from all other pelvic operations and such differences as I may point out will be my excuse for this paper.

By ectopic pregnancy I mean of course all gestations taking place outside the uterine cavity. Actually, that does not leave a very large field in which such gestations do really occur, for the old idea that gestation ever does or ever did take place upon the peritoneum has passed into a state of innocuous desuetude. Rather authentic cases of gestations originating in the ovary have been presented, but personally I must be "shown" before I will believe it. Such being the case it leaves only the tube in which such gestation can and does occur; we might as well limit our scope and simplify the pathology by calling it tubal pregnancy, for that is what it really amounts to, even though there be a rudimentary horn in a bicornate uterus and pregnancy occurs therein.

Tubal pregnancy was formerly regarded as of very rare occurrence. Now, we are frequently coming in contact with these cases. The question naturally arises, are they becoming more frequent or are we becoming wiser and better able to properly diagnose them. And in this connection I want to repeat a statement made by me at the last meeting of the State Society. That, in my opinion, practically all of the so-called pelvic hæmatoceles of which we formerly heard so much were due to rupture of the gestation-sac of tubal pregnancy. Personally I take very little stock in the pelvic hæmatoceles theory from other causes. When I expressed myself in a similar vein at the Petoskey meeting a couple of my friends of reputation immediately had a fit, and one of them after adjournment of the session came to me and said, "I am surprised that a man of your judgment and experience should make such a statement publicly." But on my return I proceeded to look up the recent literature on the subject and I find many of the best men in this country take the same position, and this is a mighty important point let me tell you, for I have known two or three of these cases to be diagnosed as hæmatoceles and operations delayed (on the supposition that the clot would be absorbed) until a septic condition had developed. The first case I ever had resulted in death when life could easily have been saved, but for the persistency of a consultant in fighting off an operation. It is very generally conceded that in a large proportion of cases normal fertilization takes place in the fallopian tube; this being the case, the only

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\*Read at the Annual Meeting of the 11th Councilor District Medical Society at Big Rapids, December, 1905.



wonder is that in more cases the impregnated ovum does not become lodged in the tube from delay in passing into the uterus. It is a fact that tubal pregnancy is most common after long periods of sterility and if such sterility was due to chronic salpingitis which produced thickening of the tube and promoted or delayed the discharge of the ovum, either pregated or unimpregnated, it would probably explain the fact that tubal pregnancy occurs oftener from causes producing sterility than from sterility itself.

The theoretical predisposing causes of ectopic pregnancy as given by the writers, are briefly:

1st. Inflammations of the fallopian tube which cause

(a) Denuded patches and desquamation of epithelium;

(b) Loss of peristaltic action of the tube;

(c) Cicatricial contraction of the tube.

2nd. An abnormal tube. Long, tortuous, with small lumen.

3rd. New formations in and around the tube.

4th. Torsion of the tube.

5th. All conditions giving rise to sterility of long standing.

In the main, the above covers the ground fairly well, but I believe there are other co-operating causes.

Briefly simplifying the development and course of tubal gestation, as the foetus enlarges the course of gestation will be modified in one of the following ways.

1st. The foetus, if near the abdominal opening of the tube and expulsion occurs before the eighth week, may be thrown out through that opening into the abdominal cavity without rupture of the

tube and this is called tubal abortion, and parenthetically let me say these are the cases that are most likely to be diagnosed as pelvic hæmatoceles.

2nd. The tube may rupture and partly or wholly discharge the foetus into the abdominal cavity or into the space between the broad ligaments, or if the ovum is lodged close down to the uterus, it might rupture in such a manner as to be discharged therein. I suppose it is possible for the foetus, if low down in the tube to go on to term. As I have before said, tubal abortion must occur before the eighth week as the abdominal opening closes after that period, but tubal rupture may occur at any time, most likely during the second month; less frequently thereafter. The feature of this condition however, which interests us most is the diagnosis, if possible, before rupture has occurred, and if not then as soon as possible thereafter.

I have found by experience in these cases that no set of symptoms is reliable, each case presents something new to befog the diagnosis and an early diagnosis often depends largely upon your former knowledge of the patient's history, as to the presence or absence of any chronic pelvic disease, of her menstrual history, etc. With the assistance of that knowledge your diagnosis is often very easy and sometimes positive, but as a rule you may suspect this condition, but still be mighty uncertain. We have operated fourteen of these cases in Jackson in the past eighteen months, nearly all drawn from our own city and county and these have all occurred in the private and consultation work of four men, viz.: Dr. D. E. Robinson, myself, Dr. J. C. Kugler, and Dr. Roy Chivers, numerically in the order given. I am more or

less familiar with a majority of these cases and I can safely say that not in one of them was a positive diagnosis made prior to the making of an exploratory incision and in one case at least not a supposition of the true condition existed. A diagnosis of appendicitis having been made and the operation for appendectomy begun, when upon getting into the abdomen the operator was con-

fronted with a cavity full of blood and it was some time before he found out where he was at. So far as my knowledge goes no writer has given so full and complete a differential diagnosis table as has Dudley in the last edition of his admirable work, and with slight changes I here with present it as it covers the ground of diagnosis in the briefest possible manner.

#### **Ruptured tubal pregnancy.**

1. No initial history of infection.
2. Great rapidity of pulse.
3. Temperature at first subnormal, later may be elevated.
4. Pain excruciating, but subsides after few hours.
5. Symptoms of hemorrhage:
  - (a) Sudden, acute anaemia.
  - (b) Weak, rapid heart.
  - (c) Dyspnoea.
  - (d) Sighing respiration.
  - (e) May be syncope.

#### **Ruptured tubal pregnancy. Haematocele.**

1. History of pregnancy.
2. Sudden onset.
3. Hemorrhage may cause collapse.
4. Temperature normal or subnormal at first.
5. Usually mass soft; later hard.
6. Fever may finally follow appearance of haematocele.
7. Uterine decidua.
8. No leucocytosis at time of rupture.

#### **Ruptured tubal pregnancy. Haematocele.**

1. Urgent symptoms at onset.
2. Development rapid.
3. Not very sharply circumscribed.
4. Immobility of mass.
5. Signs of pregnancy precede formation of mass.
6. Uterine decidua.

#### **Ruptured tubal pregnancy. Haematocele.**

1. No pre-existing tumor.
2. History of pregnancy.
3. Tumor not soft and tense.
4. Uterus somewhat enlarged.
5. Uterine decidua.

#### **Tubal pregnancy.**

1. Before rupture, gestation-sac harder.
2. Fluctuation and ballottement absent.
3. Uterus slightly enlarged. Tumor separate from uterus and crowds it to opposite side of pelvis.
4. Unusual history.
5. Tubal abortion, or rupture between fourth and ninth week usual.
6. Discharge of uterine decidua with false labor-pains occurring usually at time of tubal abortion.

#### **Ruptured pyosalpinx.**

1. Initial history of infection.
2. Pulse not so rapid.
3. Rise of temperature marked from onset.
4. Pain less intense but continuous.
5. Usually absent.

#### **Pelvic peritonitis and cellulitis.**

1. History of infection.
2. Onset less sudden.
3. No hemorrhage.
4. Temperature elevated.
5. Usually mass hard; later may soften.
6. Precedes.
7. Absent.
8. Always leucocytosis in early stages.

#### **Uterine and ovarian tumors.**

1. Absent.
2. Slow.
3. Mass sharply circumscribed.
4. Mobility usual.
5. Absent unless complicated by pregnancy.
6. Absent.

#### **Hemorrhage into ovarian cyst.**

1. Pre-existing tumor.
2. Absent.
3. Tumor smooth and tense.
4. Not so much enlarged.
5. Absent.

#### **Normal pregnancy.**

1. Uterus softer.
2. Fluctuation and ballottement later.
3. Tumor is enlarged uterus.
4. Nothing unusual in history.
5. Does not occur.
6. Does not occur.

Two of the three cases I have recently operated are so typical of their class that I will give a brief history.

*Case 1.* Mrs. P., age 32, a strong, healthy young woman, a resident of a neighboring town, had consulted me about nine weeks previous for sterility, giving the following history: Had been married twelve years, four months after marriage became pregnant and aborted at five months, without any known cause. Ten months later became pregnant again and acting under the advice of her father, who was a physician, every possible precaution was taken to prevent a second miscarriage, but at six months period she again aborted, since which time she had not become pregnant, but was very anxious to bear children. She assured me that her menstruation had been unusually regular, but scanty, thick and very dark in color, free from pain at all times with no loss of sexual powers. Upon a most thorough and careful examination I failed to find anything abnormal with the pelvic organs. There being some stenosis of the cervix I dilated gently a couple of times, and her menstrual period being at hand, prescribed permanganate of potash pills gr. 1, three times daily to be taken for thirty days, with absolute freedom from sexual indulgence, until after next menstruation, then sent her home.

These instructions were religiously carried out. I was informed that the next menstruation, following the month's administration of permanganate had been much more copious, and I was not greatly surprised to receive a letter about five weeks later to the effect that she had passed her menstrual date without menstruating and her fondest dreams were apparently to be at last realized.

About ten days later I was called to see her with her family physician who informed me that about a week previous she had gone out of town to spend Sunday and upon arising from bed on Monday morning, she had been taken with a sharp pain in the left iliac region and almost immediately began to menstruate scantily; the pain continued, but with less severity all the morning, during which time she had taken the train and gone home. Upon her arrival he had been called, and without attempting a specific diagnosis administered a hypo of morphia and left the house, but was within an hour, again called hastily because of the return of the pains, he arrived just in time to hear a terrific scream of agony on the part of the patient, followed by collapse and syncope. She became blanched, cold and pulseless, the heart beats scarcely discernible for over an hour and only by the most heroic efforts was she prevented from dying from shock. A few hours later he discovered a semi-solid mass in the left lower abdomen. He, together with other local physicians, made a diagnosis of "pelvic hæmatocele" which possessed the merit of being safe, but after waiting ten days for its absorption and finding the mass growing more solid all the time and the patient with an afternoon temperature they decided to call me. I was almost positive of my diagnosis in this case, and upon operation the next day it was clearly confirmed. A large, single, semi-organized clot was found, together with many small ones and a slight hemorrhage still going on from the abdominal extremity of the tube. An enormous amount of blood had been lost, the abdominal cavity being nearly full.

This was a case of tubal abortion with



only slight laceration of the tube, and although this is the type that we are told causes less shock and hemorrhage than any other, both were greater in this case than any other I ever saw.

*Case 2.* Mrs. B., age 28, strong, vigorous and healthy, young woman, mother of two children, girl age five, boy age three, consulted me for irregular, sluggish and scanty menstruation. Pelvic organs in fair condition, except slight laceration of cervix and perineum which I advised repairing, which she was not quite ready yet to have done. Here again I prescribed permanganate of potash pills gr. one, three times daily for a month with the result of a much improved menstruation in quantity and it came at the proper time. The next menstruation was scanty again, as was also the second which did not cease entirely and a good deal of pain was complained of in the left ovarian region, although well enough to visit in the western part of the state for ten days of this time. A physician was called in, who diagnosed a probable salpingitis after making an examination. She returned home and I was called at once, as the trip to Jackson had apparently aggravated the trouble. I found the abdomen greatly distended from peritonitis, which was quite general, but greatest tenderness in left lower abdomen. A slightly bloody uterine discharge, but too much tenderness to permit anything like a thorough examination. Was called again in the night, because of a fainting spell which frightened the family greatly. I learned that previous to this, the patient had arisen from the bed hastily because of a severe paroxysm of pain in the iliac region and sitting on a chair collapsed. I found such

evidences of hemorrhage and pronounced shock that my suspicion was aroused.

I had her taken to the Jackson City Hospital the next morning, and the next day taken to the operating room where a thorough examination was made by myself and Dr. D. E. Robinson. We both became reasonably certain of an ectopic pregnancy, and upon making an exploratory incision the following day, I found just what I expected, an abdomen full of blood, much of it in small clots, and upon carefully removing the larger ones I found lying upon the bowels a perfect, two and a half months foetus, with a miniature cord still attached. On getting down to the tube, I found it enormously distended, as large as the powder horns of our grandfathers, with a ragged rent in the middle into which I could put my whole hand. This woman, like the previous case, went on to speedy recovery and left the hospital in eleven days practically well and has been in perfect health since.

Now, just one or two points to which I want to call your attention. Don't be fooled in your diagnosis by the absence of the usual symptoms of pregnancy, for you won't get them, not one of them, no matter to what period these cases go before rupture occurs. In case two this woman became pregnant immediately following the month's administration of permanganate; she went on and menstruated twice after that and not one symptom of pregnancy was present at any time. Another point. What, if any, effect did the permanganate have in bringing about these tubal gestations?

Now, just a word about the technique of the operation. You are confronted by conditions in these cases not found in any other abdominal operations. In the first

place, no matter how large a clot you find, there are hundreds of smaller ones varying in size from a chestnut to a pin head, and you find them all over and under the bowels and tangled up in the omentum, and it is surprising how quickly the minute ones become organized; there will be thousands of these little specks resembling dried mucus all over the bowels. You cannot wipe them off with gauze sponges, neither can you ferret out the small unorganized clots

hidden away in the convolutions of the bowels, and I believe the only safe way, before closing the abdomen, is to get these as near all out as possible and notwithstanding the position of some of our best men that the abdomen should never be washed out at the time of an operation, I always in these cases do it with a hot saline solution time after time until no more clots can be found, and some one must show me a better way before I discontinue the practice.

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### SCIENCE AND ART IN MEDICINE.

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J. C. Hemmeter, Baltimore, after pointing out that an exact and definite distinction between science and art is an impossibility, reviews the history of medical thought and shows that, after the evolution of the scientific part of medicine which he has outlined, reformers were needed to emphasize again and again that, in addition to being a science, medicine is also an art. "The ultimate object of all medical studying," he says, "is to help and to heal. The peculiar problem of the physician is not so much the disease, but the diseased patient; and the significance and importance of medicine is to be sought in this object, to preserve the highest possessions of human beings, namely life and health." He then reviews the principal features of the progress in the therapeutic art during the past two decades, noting first the advances in the physical methods, the dietetic treatment and the modern nursing methods. In this connection he utters a caution against the excessive fear of contagion that has been aroused in some cases by the ultrabacteriologic theories of

the causation of disease. There is no doubt in his mind, he says, that for every case of direct infection there are ten others where physicians and nurses have actually been protected from the disease by their intimate association with the patient. This, of course, does not mean that ordinary precautions are to be abandoned, but is mentioned only to relieve useless fears that may affect the usefulness of the nurse. Recent advances in pharmacology are noted, including the therapeutic applications of discoveries in bacteriology, serumtherapy and organotherapy. Hemmeter here mentions as a probable outcome of the modern studies on immunity, the possibility of so adapting the blood of an animal to a particular form of cell as to produce an antiserum for malignant growths. In conclusion, he criticises the tendency of experimental workers to disparage or undervalue other lines of research, and vice versa. In his mind subjective and objective methods of investigation are inseparable, and he calls attention to the distinction between facts and truths. Facts are little truths appreciable by our senses; but back of and beyond these facts, later experience often reveals the higher and greater truth.—*Journal A. M. A.*, Jan. 27, 1906.

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### Editorial.

#### DOCTOR BIDDLE RETIRES.

At the meeting of the Council of the Michigan State Medical Society, held in Detroit, Jan. 12, Dr. Andrew P. Biddle declined re-election to the office of Secretary of The Michigan State Medical Society, and with the January number of the Journal retired as its editor.

Doctor Biddle comes from an old Detroit family, received his preliminary education in Detroit and the United States Naval Academy at Annapolis. He graduated from the Detroit College of Medicine in 1886, and served a term as Senior House Physician at Harper Hospital. Since beginning the practice of medicine, he has been prominent in the medical affairs of Detroit and Michigan.

Doctor Biddle has held the office of Secretary of the Michigan State Medical Society during the most difficult period in its history, the period of reorganization and growth. Never before had the work been more arduous, and never again will there be required so much thought, so much activity, or so much of what we usually call tact, as were necessary during this epoch. Under his stewardship, the society has tripled its membership, and stands to-day higher scientifically, and more firm financially than ever before. He has, as editor of the Journal since its

inception, superintended its growth and development, and by his indefatigable efforts made it what it is to-day.

Doctor Biddle's activities will by no means cease. He has recently been appointed Dermatologist to the Detroit Board of Health, and at its last meeting the American Dermatological Association honored him by an election to the Council of the Society, and by a membership on the Finance Committee of the Committee on Organization of the International Congress on Dermatology, to be held in New York City September, 1907. It is to be hoped, and it is expected that the Michigan State Medical Society may long enjoy and profit from the doctor's interest, help, and advice.

B. R. SCHENCK.

#### SUPERSTITIONS AND ERRORS IN MEDICINE.

A vast amount of facts accurately observed must be collected before theories and laws can be established. If the facts be correct, the theory will take care of itself. To illustrate how long it takes to acquire facts and give them their proper relations, no better lesson can be given than in the venereal diseases, which are not modern by any means. In Hunter's time many opinions were held. Hunter in his studies inoculated himself on the arm with the gonorrheal discharge of an inmate in the Newgate Prison and developed syphilis. He concluded at once that syphilis and gonorrhea were the same disease. It was not until half a century afterwards that the conclusion of Hunter as to the identity of syphilis and gonorrhea was finally demonstrated to be false by Ricord, who proved that his master had adopted a conclusion from an



insufficient basis of facts. Ricord said they were two distinct diseases, yet he failed to see that there was still another disease. It remained for Bassereau, one of Ricord's pupils, three generations later to demonstrate that the virus of syphilis is distinctly different from the poison which produces the contagious venereal ulcer or chancroid. Yet John Hunter was a very accurate observer. By his studies of the blood-vessels in the antlers of deer he found that the blood-vessels would accommodate themselves to circumstances and this knowledge enabled him to devise his operation for aneurism.

It is better to have a wrong opinion than no opinion, for if it be wrong you may bump up against something that will set you right. Doubtless in the past, superstition may have had its use. It may have had a restraining influence in attempting what man was unprepared to do. The false belief that the world was flat kept back discovery and navigation for years, but the world was not yet ready to benefit from the knowledge that it was not flat.

While

"Truth is truth \

To the end of reckoning"

the early superstitions were stepping stones to truth. Astrology becomes astronomy and the black arts lead to chemistry. The superstition of the church in the middle ages that it was wrong to shed human blood, kept back surgery for centuries until a master barber surgeon, Ambrose Paré, came along. He well deserves the title of the Father of Surgery, placing it as he did upon a more humane basis. Superstition and error ought to teach mankind this: after an error has been discovered, ever keep it in mind that it cannot occur again. In

all so called new systems there are old principles reappearing, which, if the past were diligently consulted, would guard against repetition and revamping of theories long ago proved futile and worthless.

Are there any superstitions in medicine? We have gotten rid of many, but some still remain. We have passed the grape seed stage in appendicitis. We no longer starve patients with a fever, on the contrary we try to assist nature by building up instead of tearing down. In typhoid fever we find many still pinning their faith to intestinal antiseptics, forgetting that the bacilli of Eberth can be grown from a blood culture and that they are dealing with a systemic infection. I think too many are still giving quinine for every condition under the sun. We do not believe in cold in infection, but how often we take refuge behind it.

We are not bound by authority as the profession once was. We can no longer justify our errors by authority, because some famous so-and-so said so. There are no authorities in medicine, and it is a mistake to speak of any one as such. Truth is the only authority. So called authority has often been proven mistaken. There is still good use in the medical profession for such men as Ingersoll in theology and Tillman in politics. They are nothing in themselves, but they provoke thinking that accomplishes good.

A common superstition, or better a phantom that physicians have is that, although they have had experience running over years, they have not the time nor ability to report their cases or give their ideas of certain diseases. Their timidity or selfishness in not writing leads us to think that, if this policy were carried out, modern medicine would soon resemble

Chinese medicine. We, each one of us, owe a debt to the rest of the profession, that no sacrifice on our part can repay. Tee Han Kee writing on Chinese medicine in *American Medicine*, says of the third period or the Retrograding age of Chinese medicine: "We now come to an age in which medicine instead of making greater progress has been gradually retrograding. The physicians who have achieved the greatest prominence in their profession have become selfish and, instead of leaving their knowledge to posterity, have buried it with them." This is true of professional men in other lines.

Each should contribute his mite that the aggregate may be large. It will repay us at times to examine ourselves to see if we are not getting into a rut and, too, if there are not more superstitions and more false theories that should be thrown out.

H. E. RANDALL.

## County Society News.

### BARRY.

The officers elected at the annual meeting of the Barry County Medical Society are as follows:

President—D. E. Miller, Hastings.  
Vice-Pres.—J. W. Rigterink, Freeport.  
Sec.-Treas.—J. G. McGuffin, Hastings.  
Delegate—J. W. Rigterink, Freeport.  
Alternate—Chas. Russell, Hastings.

### BAY.

The annual meeting of the Bay County Medical Society was held at the home of the retiring president, Dr. R. W. Brown, Dec. 11, 1905. Officers were elected for 1906 as follows:

President—F. E. Ruggles, Bay City.  
Vice-President—Mary Williams, Bay City.  
Secretary—A. W. Herrick, Bay City.  
Treasurer—C. H. Baker, Bay City.  
Delegate—R. W. Brown, Bay City.  
Alternate—Morton Gallagher, Bay City.

Dr. Brown entertained the society at an elaborate banquet.

At a meeting of the Bay County Medical Society held Jan. 8, 1906, Dr. E. A. Hoyt offered the following resolution: Resolved that we, the members of the Bay County Medical Society, are opposed to the law recently enacted to regulate the registration of births, and stand ready to pay a percapita tax, if necessary, to carry a test case to the Supreme Court. The resolution was passed and the secretary instructed to have it published in the Journal of the Michigan State Medical Society.

A. W. HERRICK, Sec'y.

### CALHOUN.

The annual meeting and banquet of the Calhoun County Medical Society were held in Albion Dec. 13, 1905.

Dr. C. S. Gorsline, of Battle Creek, presented a paper entitled "Appendicitis," after a recent personal experience with that disease.

Dr. W. M. Riley, of the Battle Creek Sanitarium, gave a paper entitled "Cause and Diagnosis of Diseases of the Nervous System."

At the election of officers for the ensuing year the following were chosen:

President—W. H. Haughey, Battle Creek.

Vice-President—R. M. Gubbin, Ceresco.

Secretary-Treasurer—A. S. Kimball, Battle Creek.

Eight new members were admitted into the society at this meeting.

At the banquet which followed the business meeting the president's address, "Suggestions in Every-day Practice," was read by Dr. A. J. Abbott, of Albion. Appropriate toasts were responded to by members of the profession and others and musical selections followed and closed a most profitable and pleasant meeting.

The next meeting will be held in Battle Creek. March 6, 1906.

A. S. KIMBALL, Sec'y.

### DELTA.

The Delta County Medical Society held its annual meeting at Escanaba Dec. 12, 1905. The following officers were elected for the ensuing year:

President—Geo. Bjorkman, Gladstone.

Vice-President—A. L. Laing, Rapid River.

Secretary—H. W. Long, Escanaba.

Treasurer—Wm. Elliott, Escanaba.

Director—M. P. Fenelon, Escanaba.

Delegate—Geo. Bjorkman, Gladstone.

Alternate—W. J. Laird, Nahma.

Dr. Theo. A. Felch, of Ishpeming, was elected

an honorary member of the Delta County Medical Society.

Following the business meeting the society entertained a representative of each of the professions of the county and Dr. Felch, of Ishpeming, and Dr. Cunningham, of Marquette, as its guests at a banquet.

As the Delta County Medical Society entertains the Upper Peninsula Society at Escanaba in 1906 it has already begun to lay plans for the meeting.

H. W. LONG, Sec'y.

#### IONIA.

The Ionia County Medical Society held its annual meeting Dec. 13, 1905, convening in the comfortable rooms of the Town Club. The time was taken up solely with business, no papers being presented, although several topics of medical interest were informally discussed.

The officers chosen to guide the society through the coming year are as follows:

President—W. R. Alton, Portland.

Vice-Presidents—F. M. Marsh, Ionia; C. B. Gauss, Palo; J. F. Pinkham, Belding, and F. L. Morse, Sibewa.

Secretary-Treasurer—C. S. Cope, Ionia.

Censor—W. L. Barnes, Ionia.

Delegate—C. S. Cope, Ionia.

Alternate—C. B. Gauss, Palo.

Auditors—David McClurg, Portland, and J. F. Pinkham, Belding.

C. S. COPE, Sec'y.

#### KENT.

The annual meeting of the Kent County Medical Society was held Dec. 13th, 1905. More interest was shown in this than in any other meeting since our organization, and we anticipate many good things for the coming year. The following officers were elected:

President—Chas. C. Irwin, Grand Rapids.

Vice-President—J. A. McPherson, Grand Rapids.

Secretary—Francis J. Lee, Grand Rapids.

Treasurer—S. L. Rozema, Grand Rapids.

Delegates—R. R. Smith and A. M. Switzer, of Grand Rapids.

Alternates—G. L. McBride and E. M. McCoy, Grand Rapids.

F. J. LEE, Sec'y.

#### LENAWEE.

The annual meeting of the Lenawee County Medical Society was held at Hotel Gregg, Adrian, Dec. 12. President R. M. Eccles called the meet-

ing to order, thirty members being present. Minutes of the last meeting read and approved and the secretary's report accepted. Treasurer's annual report showed the society to be in a flourishing condition financially, there being \$53.00 on hand. Referred to the board of directors.

F. E. Andrews, chairman, read the report of the board of directors, and R. M. Eccles, delegate to the last state meeting, gave his report of the meeting.

Following the retiring president's address was the annual election of officers, which resulted as follows:

President—L. S. Town, Geneva.

Vice-President—D. L. Treat, Adrian.

Secretary-Treasurer—E. T. Morden, Adrian.

Board of Directors—L. S. Town, Adrian; C. Kirkpatrick, Adrian, and R. M. Eccles, Blissfield.

C. G. Lehman, of Palmyra, and J. E. Westgate, of Adrian, were elected to membership.

Upon motion the president appointed C. Kirkpatrick, W. B. Sprague, and J. C. Johnson a committee to draw up resolutions upon the death of H. D. Hull.

D. L. TREAT, Sec'y.

#### MARQUETTE—ALGER.

The Annual Meeting of the Marquette-Alger Counties Medical Society was held at the Negaunee Hospital on Tuesday night, Dec. 19th, 1905. Twenty members were present. Dr. H. W. Sheldon read a paper on Addison's Disease, and presented a case of the malady. The officers elected for the ensuing year are:

President—G. G. Barnett, Ishpeming.

Vice-Pres.—H. M. Cunningham, Marquette.

Sec.-Treas.—H. J. Hornbogen, Marquette.

Delegate—H. W. Sheldon, Negaunee.

Alternate—J. H. Andrus, Negaunee.

H. J. HORNBOGEN, Sec.

#### MASON.

The following paper was read before the Mason County Medical Society by Dr. Edward J. Bernstein, of Kalamazoo:

#### MASTOIDITIS AND THE RADICAL OPERATION.

EDWARD J. BERNSTEIN, KALAMAZOO.

It seems to be a very common error to think of suppuration in the tympanic cavity as something quite distinct from mastoiditis, while in truth, owing to anatomic characteristics common to this



portion of the petrous bone, they are part and parcel of the same condition. The fact is that the diploic structure of the mastoid is not like that of ordinary bone, but these holes (for want of a better name) are true reduplications of the tympanum, lined throughout with a single layer of endothelial cells of the identical character which one finds in the tympanic cavity. In other words, it is but a continuation backwards of the drum cavity and the diseases of one are diseases of both, in the vast majority of cases. Politzer and Brühl in a large number of postmortems found pus in the antrum and mastoid cells, in acute middle ear suppurations even where there had been no symptoms of mastoid irritation *in vivo*; and that the pathological changes were spread over this entire mucous membrane. The difference was one of degree and that degree dependent on this; that in certain cases, due almost entirely to anatomic conditions which departed from the standard, the purulent secretions in that part of the bone were shut off from their normal drain—through the aditus to the drum, thence to the eustachian tube, or external auditory canal. These alterations are due either to a narrowing of the aditus, a too sharp bend in its curvature or to the enormous swelling of little folds and reduplications of the mucous membrane, at its mouth. You are no doubt aware that in the tympanic cavity, in the neighborhood of the aditus, we find these folds—some running horizontally, some running vertically, a few irregularly disposed about the stapes or fenestra cochlearis (which are of pathological importance in obstructing the free play of this bone). A third set of folds is found, principally in the neighborhood of the antrum.

That these are not merely academic distinctions, but of real value in a proper appreciation of the disease at hand and the rationale of its treatment is clear, on closer study.

Aside from obstructing free drainage in the upper portion of the tympanum, the reduplications of the first sort may be considered as playing an important role in the etiology of those diseases of the tympanic attic, the majority of which start with a suspension of vaso-motor inhibition in that region. Taking into consideration these reduplications, we can readily see that the secreting surface of the tympanic cavity may easily be doubled or trebled—a condition which serves to account for the rapid development of congestive disorders in this place, and for the copious exudate without calling into consideration any contribution from the antrum. As the blood supply of this region comes directly from the carotid, it affords an opportunity for sudden engorgement of

the mucous membrane and submucous tissue, in the event of suspension of vaso-motor inhibition, of general or local reflex origin.

Mastoiditis occurs as acute and chronic primary, and acute and chronic secondary affections.

Acute primary inflammation is quite rare and is usually the result of injury, exposure to severe cold, or may occur in the course of syphilis, but it is open to question even in these cases if some preliminary inflammation has not preceded.

Secondary inflammation occurs as a consequence of one of three conditions: First, an acute congestion, generally in its inception a vaso-motor neurosis; second, an acute catarrhal inflammation starting as a disturbance in the naso-pharynx and extending progressively and often rapidly; and third, and this is possibly the most prolific source, as a sequence of suppurative disease of the drum. In those acute catarrhal inflammations, in the exanthemata, or influenza the trouble begins in a portion of the mucous tract remote from the middle ear, usually in the naso-pharynx. In these cases the primary congestive stage is of short duration and is accompanied by, or followed rapidly by, considerable swelling of the mucous membrane and by increased activity of the secreting glands. The pain is here less sudden in its onset and less severe in its paroxysms than in the acute variety of the vaso-motor type; the appearance of the ear also indicates a difference in condition, characterized by a more generally diffuse congestion at the inner end of the canal and tympanum. The nervous system is less profoundly affected and the progress of the trouble is slower and more progressive. The whole course of a case from its inception to possible necrosis of bone may only last a few days. Often, indeed most often, the acute condition will quickly subside as soon as a rupture of the tympanum occurs, whether artificially or spontaneously done, leaving at times only a sense of fullness in the ear. When this does not result then this complex results, *viz.*: Pain referred to matoid or vertex, hyperpyrexia, and slight tenderness over the mastoid. Unless the true state of affairs is now recognized and recourse had to opening the mastoid, in a short time a fluctuation will be found over that structure, at its tip, in the digastric fossa, or symptoms of meningitis intervene to tell of relief of pent-up pus.

Before opening of the tympanum occurs we often find a most profound disturbance to the nervous system, subnormal temperature, rapid pulse, slowed and irregular breathing, irregularity of pupils, jerky contractions of the muscles of the arms; in short, all the premonitory symptom

complex of acute meningitis, and this is most often found in the vaso-motor variety.

As a result of the slow progressive inflammation of the mastoid, one of two conditions results a limited necrosis, or, when the inflammation subsides without such, an increase in the bone elements and an obliteration of the mastoid cells—a process of hyperostosis. This latter condition results most frequently in a third category of mastoid complication as a result of prolonged suppuration. It then produces the condition known as sclerosing or eburnation of the mastoid. It is nature's attempt to prevent the spread of the suppurative process to the brain coverings; it usually occurs when the purulency began in early life and did not result in necrosis. It explains the apparent immunity from deep-seated trouble in those who have carried suppurative ear diseases from childhood. That this immunity is not complete is too often shown in sudden lighting up of apparently cured conditions, especially in cold climates where they are likely to be exposed to the dangers of intense cold as in driving.

Being confronted with a case of acute mastoiditis, and by that I mean such a condition calling loudly for relief of pent-up pus behind the aditus ad antrum—the question presents itself: have I here an empyema of the pneumatic cells capable of resorption or have I to deal with one in which necrosis will quickly result?

That one cannot tell from casual inspection whether one has this latter or not is shown in a number of cases where mastoids have been opened and the whole process had undergone necrosis without even rupturing the drum. I have had two such cases.

In an acute case the later the drum is opened the more likely we are to find necrosis. Where a tympanum is opened, if there be not a decided decrease in discharge within four weeks, in cases of profuse suppuration, Körner invariably found caries. As to the question of the diagnostic value of percussion to determine the integrity of the bone, Jurgens (*Monats. f. Ohrenh.*, November, 1900) has shown upon section of twenty-four cadavers that it is utterly unreliable, though Körner held that by this he could determine, in a measure, its condition. Of one thing I should beg to call your attention and that is, that in diabetes and influenza the most serious necrosis may occur with no external manifestations, such as are given by pressure, sensitiveness or swelling. Indeed this last condition we rarely see today as most practitioners are too alert to permit it to occur before calling on the aurist.

Given a case of acute complication of the middle ear, how shall we handle it? Firstly, on the

first sign of trouble a big thorough opening through the posterior segment of the drum, continuing the incision towards the upper and posterior wall, a wick of sterile gauze is then placed loosely in the canal. If pain be not relieved immediately, a Leiter's coil or ice pack on the head, for not over thirty-six or forty-eight hours. It has been objected that the coil serves merely to mask the symptoms, and that it will not abort a mastoiditis. No, it will not, for the condition already exists, and all we wish to do with continuous application of cold—for this short period—is to so reduce the swelling of the small reductions of mucous membrane, to which I have above called your attention, that the natural flow towards the tympanic cavity may be free. No possible harm can result from this conservatism, when a case is diligently watched. The symptoms usually give enough indication that one must open the mastoid. When pain and fever do not abate in at most eight days and in the meantime no more urgent indication has called for an earlier interference, we must proceed to do a simple mastoid opening. Schwartz, in giving this indication for procedure, bewails his inability to positively tell when to operate in cases which run course without pain, oedema, or fever. It is, however, now considered best when an acute suppurative ear process continues beyond its ordinary duration of four to six weeks, to make an exploratory incision in the bone. It is especially called for when gastric disturbances, such as loss of appetite, heavily coated tongue and constipation exist. These symptoms usually point to extra-dural abscess.

In the days before the introduction of the Widal reaction countless numbers have gone to their graves in these conditions, with diagnosis of typhoid fever, many of whom we now save by doing simple operation of Schwartz. The radical operation (that of Zaufel-Körner, not that of Schwartz, which is intended to act simply as a drain, and the indications for which have just been given), is done for the eradication of diseased structures in the more chronic cases, and is the operation, more or less modified, done by most men of experience to-day. Its indications are as follows:

First. In chronic inflammation of the mastoid with repeated swelling of the superimposed tissues, which may even show a tendency to disappear, notwithstanding complication of abscess over the process, *especially if a fistulous track exists*, leading to the skin at the side of the neck, the external auditory canal, or towards the pharynx. It is done here, even though there be *no present direct danger to life*.



*Second.* If the otoscope shows an implication of the attic (through fistulæ in the upper posterior periphery of the drum membrane). *Especially urgent* are those cases in which one has *choleostomatous* formation.

*Third.* Schwartz's indications for the radical operation especially include *all* cases of chronic suppurations of the middle ear, even though there be *no external evidence* of the inflammatory process going on in the deeper mastoid cells. Certainly as soon as any possibility of threatened danger to life, through retention of pus or production of choleostoma, supervenes.

*Fourth.* As conservative prophylaxis to prevent fatal complications in every case of intractable middle ear suppuration which has resisted thorough treatment over four months, even though no external evidence of the changes going on in the mastoid are at hand; whenever we have continued formation of polyps or feel certain that caries of bone exist; or in those in whom the otoscopic examination shows that the excessive flow of pus comes mainly from beyond the drum cavity, and yet not have evidence of pus retention. Körner performs the radical operation as soon as the diagnosis of chronic bone disease is established. If this be uncertain, then the following demand the radical.

*First.* As soon as pus retention appears consecutive to chronic suppurations which do not yield promptly to treatment.

*Second.* In hyperostosis of the auditory canal, because such prevents a free view of the deeper parts and interferes with the treatment of the suppuration.

*Third.* At the first signs of intracranial complication. If none of these exist and a diagnosis of necrosis is not positive, then he thinks an operation uncalled for. "I might add," he says, "that I have never seen a case in my own experience, nor can I find any record of such where a *simple unobstructed case of muco-purulent* discharge from the antrum ever led to intracranial complications." He therefore warns us against doing a radical operation unnecessarily, as nothing does so much to discredit surgery as indiscriminate operation. The commonly accepted contra-indications for radical operation are these:

*First.* Very young children. for in them, thanks to their great natural tendency to spontaneous cure and expulsion of diseased tissue—which clinical evidence upholds—simple opening of the mastoid suffices. We are especially warned against too radical procedures in very early childhood, for we must bear in mind that at birth the mastoid cells do not exist, and that they are only gradually developed; but by the *end of the third*

*year* they have attained mastoids approaching the mature adult. Furthermore, the general contra-indications to any important operation. Whether diffuse suppurative Lepto-meningitis contraindicates the operation is open to question by some, Jansen of Berlin among the number, though the most conservative men refrain in these conditions. Quinke's lumbar puncture facilitates the diagnosis in these cases and at the same time aids treatment.

Both Körner and Schwartz, as well as most other men to-day, unite upon the fifth indication of Schwartz, "as a prophylactic in order to prevent fatal consequence in incurable fœtid discharges *without inflammatory* symptoms of the mastoid and without any indication of pus retention, as soon as full otoscopic investigation shows that the suppuration is not confined to the drum cavity." Where regular and thorough cleaning, removal of diseased tissue fails to cure the discharge, you may rest assured in these cases that the bone is seriously involved and that in all probability, choleostomatous formation will be found in antrum and mastoid cells.

As to the ultimate results of the radical mastoid operation, we take the statistics of the Halle clinic as an example.

Out of 200 cases the otorrhea was permanently cured in 74.2 per cent.: Stacke had 94 per cent cures; in the balance there was but slight discharge, and all possible danger of cranial complication was eliminated, as free drainage was thereby permanently established. There were 5.9 per cent. deaths at this (Halle) clinic, and the postmortems showed except in about one p. c., that death could not be attributed to the operation, but rather to the fact that it had been undertaken too late. In other words, that serious intra-cranial complications were already present before the operation took place. In a personal communication some five years ago, Jansen of Berlin told me that he never had a bad result when the operation was undertaken early, and only a very small p. c. of loss after first signs of meningeal involvement.

As to hearing, the results are equally brilliant. Schwartz's conclusions are as follows: "At all events, the possibility of very marked improvement in hearing is not excluded, and on the other hand, a slight reduction of hearing with retention of fairly good function, in individual cases, is not to be denied."

Stacke reports in 100 cases, hearing remained the same in 49, improved in 31, and made worse in six, while in 14 no record is given.

Grünert reports 55 per cent. improvement. 39



no change, and 6 per cent. made slightly worse. He concludes thus: "(1) In cases with intact labyrinth, one may await improvement, provided there was considerable degree of deafness before the operation. (2) It is exceptional for these cases to be made worse or even to remain the same. (3) In those cases where functional tests were made before operating and normal integrity remains, as a rule operation does not affect hearing. (4) In a number of cases belonging to this category, a very perceptible increase of function was noted, though we must be also prepared to find even a decrease at times in a very small number."

As regards the manner of performing the operation, I shall have very little to say, as no written description adequately describes it. In this matter I can not too heartily endorse the dictum of Körner, who says: "Whoever would attempt an important operation on the living from description alone must make many fatal errors. One should have seen an adept do it a number of times under all variety of circumstances, and then do it dozens of times on the cadaver."

But this much can be said, that I am in thorough accord with those who condemn the closure of the post auricular wound by blood clot in acute cases. This is beginning to find echo in American otology.

In the radical operation, for chronic troubles, we do close the postauricular incision, making a flap of the posterior wall of the external auditory canal at the time of the operation, and then, a few weeks after, making a second opening through the skin to complete the plastic. We look for a linear scar which is hardly perceptible, for increased or at least retained function, cessation of discharge and absolute immunity from intracranial complication in from 80 to 95 per cent. of our cases.

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#### MUSKEGON—OCEANA.

The annual meeting of the Muskegon County Medical Society was held at the office of Dr. Jacob Oosting, Dec. 8, 1905. Meeting called to order by the president, Geo. S. Williams.

Jacob Oosting read a paper on "Obstetrical Errors," which was most interesting and instructive. It brought forth a general discussion and relation of case incidents in obstetrics which was actively participated in by nearly all present.

The matter of changing the name of the society from the "Muskegon County Medical Society" to "Muskegon-Oceana Counties Medical Society" was discussed and finally decided that as there

was very little prospect of the organization of a society in Oceana County the name of this society be changed to "Muskegon-Oceana Counties Medical Society."

The following new members were received into the society:

W. L. Griffen, Shelby, Oceana Co.  
R. J. Davidson, Shelby, Oceana Co.  
G. F. Lamb, Pentwater, Oceana Co.  
Gayfree Ellison, Muskegon.  
Lunette I. Powers, Muskegon.

The following officers were elected for the year 1906:

President—J. F. Denslow, Muskegon.  
Vice-President—J. D. Buskirk, Shelby.  
Secretary—V. A. Chapman, Muskegon.  
Treasurer—Jacob Oosting, Muskegon.

V. A. CHAPMAN, Sec'y.

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#### O. M. C. O. R. O.

The O. M. C. O. R. O. County Medical Society held its annual meeting on Dec. 13, one week early on account of the holidays. The following officers were elected:

President—C. H. O'Neil, Frederick.  
Vice-President—L. A. Harris, Gaylord.

Secretary-Treasurer—C. C. Curnalia, Roscomon.

C. C. CURNALIA, Sec'y.

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#### ST. JOSEPH.

The St. Joseph County Medical Society met in annual session at Three Rivers, Dec. 19. Dr. E. J. Bernstein, of Kalamazoo, read a paper, interesting and full of scientific value, on "The More Common Diseases of the Ear and Throat." For this paper a vote of thanks was tendered Dr. Bernstein. The Councilor of the Third District, Dr. Haughey, of Battle Creek, was present and gave a good talk on "Pneumonia." What the society lacked in numbers was made up in enthusiasm.

The election of officers resulted in the choice of the following:

President—W. C. Cameron, White Pigeon.  
Secretary—John R. Williams, White Pigeon.  
Treasurer—Thos. J. Haines, Three Rivers.  
Delegate—John R. Williams, White Pigeon.  
Alternate—Blanche Moore Haines, Three Rivers.

Board of Directors—John R. Williams, M. Sabin, Thos. J. Haines.

JOHN R. WILLIAMS, Sec'y.

## SCHOOLCRAFT.

At a regular meeting of the Schoolcraft County Medical Society, held in Manistique, Dec. 19, 1905, the following resolutions were unanimously adopted:

Whereas, As our State Medical Society and National Medical Organization discourages and discourages the newspaper publication of cases and of physicians' names in connection with cases and

Whereas, Such publicity is not in keeping with the established code of ethics of the American Medical Association, therefore be it

Resolved, That we, the members of the Schoolcraft County Medical Society do hereby most respectfully petition and request the editors of all the county newspapers from and after the date of Jan. 1, 1906, to refrain from the publication of cases or of physicians' names in connection with clinical, surgical or other cases or of any matter whatever pertaining wholly to professional work. And further be it

Resolved, That on and after Jan. 1, 1906, all members of this society shall discontinue the use of professional advertising cards in any form and the editors of the county newspapers are hereby requested to discontinue the publication of the same.

G. M. LIVINGSTON, Sec'y.

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## Medical News.

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At a meeting of the California Academy of Medicine recently, Dr. B. F. Carpenter, in the course of the discussion of a paper stated that he knew of an X-ray operator who had no active spermatozoa in his semen as long as he was using the light regularly, however active spermatozoa reappeared after he discontinued its use.

Dr. M. P. Fenelon, of Escanaba, is spending a month in the south.

Dr. L. M. Power has located in Escanaba.

The newly appointed staff of the Delta County Hospital are Drs. Fenelon, Forsyth, and Cotton, of Escanaba. They began their services Jan. 1st, 1906.

**Free Treatment at the University Hospitals.**  
—The discussion with regard to free treatment in the hospitals of the University of Michigan, which has recently encouraged some expression of a sentiment that persons who are financially able

to pay for medical or surgical treatment should not receive it free of charge, led President Angell to refer to the subject in his last annual report. He gives the reasons which have seemed to the authorities sufficient justification of the present system.

"It is with regret," he says, "that we have learned during the year that a considerable number of our friends in the medical profession have been aggrieved because we make no charge for the treatment in our hospitals of patients who might afford to pay a liberal sum for medical or surgical care. This complaint arises, we think, from a failure to understand the ground on which our hospitals were established and are conducted. Certainly they were not founded with any purpose to interfere with the business of practitioners but rather with the purpose of giving medical students the best preparation for the responsible duties of practitioners. Patients were invited to come and receive gratuitous treatment provided they paid a reasonable sum for board and presented themselves before the classes for clinical treatment. The primary object we had in view was the instruction of the students. It proves in our years of experience that it is very rare that a patient who could afford to pay the fees for private treatment resorts to the hospital. Reluctance to come before the class for treatment generally deters persons of means from presenting themselves. Therefore the conditions upon which patients are admitted for gratuitous treatment are not, in fact, so seriously objectionable as those have supposed, who have been led to believe that we were interfering with the legitimate practice of the profession.

"But furthermore it is not clear how, if we desired, we could determine who should be asked to pay a fee for treatment. We have no authority to require anyone to make a return of his property to us. And if we had, it is not easy to fix the line which should be drawn between those who are and those who are not able to pay a sum beyond what is now required of every patient. But in fact the interference with private practice, so far as we can judge from our knowledge of the pecuniary ability of our patients, is so very trifling that we trust our medical friends will not give themselves concern about the matter. Most assuredly as the medical departments were established and are administered with the intention of aiding the profession, we shall not willingly do anything to harm the profession. We are well aware that the prosperity of the departments depends largely on their support, and this we shall endeavor in any feasible way to deserve."  
—*University of Michigan News Letter.*



The address of Dr. George Dock, professor of the theory and practice of medicine in the University of Michigan, which was delivered at the commencement exercises of the College of Medicine of the University of Southern California, has been published in the *Southern California Practitioner* under the title "Physician and Patient."

Dr. Victor C. Vaughan, dean of the department of Medicine and Surgery in the University of Michigan, lectured before the students of the University of Kansas School of Medicine Nov. 17, 1905, on the subject, "Immunity from Diseases."

Dr. Frederick G. Novy, professor of bacteriology in the University of Michigan, gave a lecture Nov. 4, on "Trypanosomes," before the Harvey Society at the Academy of Medicine, New York City. This was the third lecture of the course, the others being given by Professor Von Noorden of Frankfurt, Germany, and Professor Meyer, of Vienna, Austria.

**Papyrus Ebers.**—C. H. von Klein, Chicago (*Journal A. M. A.*, December 23), gives the history of the discovery of the Ebers papyrus and its description, with the evidence as to its age, nearly 1600 B. C. It appears to be considered as probably a copy of a still older document, going back, perhaps, to the time of some prehistoric Hyksos king. From the description of its contents it would seem to cover nearly the whole subject of the practice of medicine and therapeutics as known to the ancients and to antedate our knowledge of ancient medicine hundreds of years before Hippocrates, who hitherto has been accounted as the father of medicine. Von Klein also reviews the other data in regard to ancient Egyptian medicine, and goes at some length into a discussion of the relations of Mosaic and Talmudic medicine to that of the earlier Egyptians. The Ebers papyrus, he says, opens a new era in the history of medicine and pharmacology, showing that thousands of years before the Christian era there were learned men in Egypt who could make intelligent observations of disease, combine complicated prescriptions and use them with judgment. In conclusion he speaks of a translation into English which he has made of this most important document of the early history of medicine.

The first of January every member of the American Medical Association received from the General Secretary of the A. M. A. a blank sheet for the reporting of certain information to be used in the Biographical Card index of all the legal practitioners of medicine in the United States. There is at present no authentic list of the American

medical profession, or any record of their education and preparedness to practice medicine. This is highly desirable in view of the progress in medical Science and the advances in the teaching methods of the Medical Colleges, especially in the last 25 years. The A. M. A. proposes to push this work to a successful issue, with the help of the profession. There should be a repository for this information, and the logical one is the A. M. A. For that reason we urge every one to fill out the blanks and forward them at once to the Gen. Sec. A. M. A., 103 Dearborn ave., Chicago.

The American Medical Association is also working upon a National Medical Directory which shall be authentic, and which shall differentiate all members of County, State and National Medical Societies from the irregulars, quacks, etc. This volume will be much more serviceable than any now on the market, being published by people who will make the greatest effort possible to bring it up to date and keep it there. Information regarding college, date of graduation, and date of license will be verified from official sources. The same information will be furnished regarding each physician whether or not he is a subscriber to the directory.

As we go to press the news reaches us that Dr. Beverly D. Harison, Secretary of the State Board of Registration in Medicine, and Dean of the Medical Fraternity of the "Soo," is to locate in Detroit, and engage in the practice of Legal Medicine, as well as giving a more central location to the offices of the State Board of Registration in Medicine.

Dr. Birge C. Swift, of Millington, was married October 7, 1905, to Miss Marian McIntosh of Grand Rapids.

As noted in our issue of last month our neighbor, the Alkaloidal Clinic, has appeared under a new cloak. The American Journal of Clinical Medicine is an attractive Journal, and full of life and spirit, and we wish it success in its new form.

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## Correspondence.

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### A GREAT WORK—WHAT A COUNTY SOCIETY MAY DO.

The following letter from one of the leading surgeons of Indiana contains so much of interest to county societies, indicating what may be done in any section where as many as three or four



wide-awake men can be gotten together, that we are glad to put it before the profession. "What one man has done, other men can do."

Valparaiso, Ind., Dec. 21, 1903.

Dr. J. N. McCormack,  
Chairman Committee on Organization,  
Bowling, Green, Ky.

*Dear Doctor*—Your letter asking me to elaborate our plan of Post Graduate work here, with the view that such an account may be used in inducing other medical societies to do likewise has been received.

I am greatly pleased to have the privilege to do this, not only for your personal gratification, but for the reason that I am confident that it will redound to the very great benefit of such societies as deem it wise to adopt our plan, as well as to the individual members. It will enable them to do better and more efficient work for the public as a whole, and aid each individual physician in rendering the best possible service to the unfortunate sick.

Our work was begun two years ago by getting every physician interested in becoming more familiar with scientific and practical knowledge which would be an advantage to him at the bedside, and thus would broaden him as a physician. With this end in view, we rented a room, formed a club, and endeavored in every way to strive and build up the social, scientific, and material spirit for the welfare of the profession. From every point of view I desire to report that we have been eminently successful.

In carrying out this plan we divided our work in such a way that each physician was required to act as a teacher of some special subject, and all the others took their places as students once more. Anatomy and Surgery was assigned to one, Physiology and Practice to another, and so on through the list of subjects, one fundamental and one practical branch to each teacher. Our meetings were held twice a week, regular lessons were assigned, and we were expected to be present and give one hour's time to the recitation and study of such subjects as were assigned to that evening. In this way we were enabled not only to exchange individual views as to what we believed, but could always have some good medical authority to place us right if it was found that we were wrong. This plan proved very desirable, and we soon learned that the teacher of the topic derived far greater benefit from his course, for the reason that he was required to study more to hold his ground, often against the combined opinion of his class.

After going along in this way for a time it be-

came apparent that our faculty should be changed from time to time, in order that the teachers should become proficient in more than one subject. I desire to report to you that we found this most satisfactory, and that it has resulted in a marked improvement in the attainments of every member of our profession, which means of course of the profession as a whole.

The social feature of our plan has done as much, if not more, for the good of the profession, as the scientific work. I am now able to say that we have no one in this county not on the most friendly terms with each other, and that such condition is because they actually desire to be friendly.

In addition, we have kept up our regular society meetings, always with increased interest, and although ours is not one of the large counties, I feel safe in saying that we have one of the best, if not the best, society in the State of Indiana, and we are resolved to go on and make it still better.

In connection with this work it did not take us long to determine that, in consideration of the increase in the cost of living in recent years, we were not being adequately paid for our services, and we concluded that it was only just that the scale of fees should be increased one-half. In order that this might be uniform, we all signed the schedule definitely fixing the price of services for both day and night and had this published. It went into effect without a single ripple, and has been strictly maintained. I have never heard a complaint on the part of the public or of the agreement being violated by any member. In fact, the public seems to understand the necessity for the change, largely for the reason that it knew we were making an heroic effort to give the people better service. The results have been that our incomes have been increased by one-half, and that night work has been reduced to a minimum, giving us the evenings for post graduate work and to spend with our families. While we have not accomplished all that we set out to do, we have certainly made rapid progress, and are not to stop or falter until our ideals are attained.

Probably this very crude plan might be greatly elaborated and improved, but it has worked so well, and given such universal satisfaction here that I am sure none of us would be willing to disturb the present satisfactory condition.

Can you be able to use what we have done as an incentive for success or to elaborate it for the promotion of medical organization, you will have the very best wishes of every member of our profession in doing so. With personal best wishes, I am,

Most sincerely yours,

DAVID J. LORING, M. D.

## Miscellaneous.

### REGULAR MEETING OF THE STATE BOARD OF HEALTH.

The regular meeting of the State Board of Health was held in the Secretary's office at Lansing, Michigan, January 12, all the members of the Board being present, as follows: President Victor C. Vaughan, M. D., Ann Arbor; Charles M. Ranger, A. B., Battle Creek; Aaron R. Wheeler, M. D., St. Louis; Angus McLean, M. D., Detroit; Malcom C. Sinclair, M. D., Grand Rapids; Hon. Coleman C. Vaughan, St. Johns, and Frank W. Shumway, M. D., Secretary.

After the disposal of the routine business, reading of the minutes, auditing of bills, etc., the following important work was taken up and passed on:

On suggestion by the Secretary, it was decided by the Board that hereafter the title of the official organ of this Department shall be "Public Health, Michigan." All pamphlets and bulletins issued by this Department, including the Teachers' Sanitary Bulletins, will be issued under this head, and will be bound in attractive covers and in suitable form to insure preservation. This method has been adopted by reason of the substantial saving in postage that will result, it being estimated that the postage of the Department will be reduced fully one-half thereby.

The Board decided to coöperate with Prof. Delos Fall, of Albion College, a former member of this Board in an endeavor to ascertain from the analysis of the uncontaminated spring waters of the state a definite chlorine standard for a pure water, a sum of money being set aside out of the appropriation to defray expense of carrying on this investigation.

A Committee of the Board on Public Water Supplies was appointed, comprising Doctors Vaughan, Sinclair, and Shumway, to coöperate with a similar committee from the State Engineering Society and State Medical Society in an endeavor to secure legislation to invest a commission with power to investigate and advise regarding public water supplies.

The Board authorized the Secretary to prepare and publish a separate pamphlet on Disinfection, giving the different methods of disinfection now in use, and advising in detail how to proceed in this matter. This has been deemed necessary for the reason that many of the local health officers, as well as physicians

and the public generally are not familiar with disinfectants and their use.

The Board decided to make the examination for embalmer's license both written and oral, using the cadaver in connection with the oral work.

The proposed plans for a new sewer system for the Michigan Soldiers' Home, Grand Rapids, were considered and approved by the Board.

### EXTRACTS OF MINUTES JANUARY MEETING OF COUNCIL, MICHIGAN STATE MEDICAL SOCIETY.

On January 12th the Council met in the parlors of Hotel Cadillac at Detroit, and was called to order by Secretary Haughey who requested that a temporary chairman be appointed. Dr. C. B. Burr, of Flint, was made temporary chairman and later unanimously elected as Chairman of the Council to fill the unexpired term of Dr. Leartus Connor, resigned.

The Secretary's Report, containing several recommendations, was then read, which we abbreviate as follows:

"Since our last Annual Meeting several changes have taken place in the personnel of the Council. Four new names appear on our roster and four old, familiar ones are not to be seen there. While we regret the loss of the old, we welcome the advent of the new, and bespeak for the Council more energetic and vigorous work as a result of the change. Thus it is ever: the work goes on but the worker drops out. When the tired head and hands refuse to longer respond to the strenuous demands upon them, others fresh and vigorous arise, assume the burdens and bear them on toward the ultimate goal; until they too in turn sink by the way and must give place to succeeding workers. Human endeavor only succeeds at the expense of a succession of workers, each doing his share then dropping out happy in the knowledge of what he has accomplished for the general good.

"The good done by the ex-members of this Council cannot be measured by human skill. Suffice it to say: they have done their best; they have earned their reward, may it be ample. The remaining members trust that they may long be spared to the Michigan State Medical Society where their wisdom will aid in the great work of that organization.



To the new members we can only say: There is much more work ahead, give it your best thought."

### RECOMMENDATIONS.

That the present form of report blanks for use of County Secretaries, which seem to be almost ideal, be continued as the official blank for these reports.

That more active work be required of the Financial Committee; that all contracts and bargains requiring the expenditure of money receive its approval; and that its Chairman be required to countersign all treasury warrants.

That the strong competition for business, caused probably by a surplus of Doctors, has resulted in many instances in a great disregard for professional ethics is a matter of common observation to the most of us. It has occurred to us that greater stress should be laid on teaching ethics in our medical colleges than has heretofore been done. We would suggest that the Chairman of this Council incorporate in his report to the House of Delegates a request that the Michigan State Medical Society consider the advisability of recommending that medical colleges add to their curriculum a Chair, or at least a branch, of Professional Ethics; that this subject should be taught in such a manner as to inspire the pupil with an understanding that his honor is involved in maintaining the ethics of the profession, in the same manner as individual honor has always been involved in questions of right and justice.

The General Secretary's Report showed cash from all sources for the year, \$6243.14; expenditures for the Journal, \$4265.26; for the State Society, \$772.42. Cash in Treasurer's hands December 31, 1905, \$1205.46.

### EXCERPTS.

"The Journal is now entering upon its fifth volume. Experience clearly proves that the State Journal occupies a field of usefulness permanent in character. Its space is in constant demand, and we are unable to fulfill its purpose of publishing all the material read at the various State, District, and County Medical meetings. To publish all such material would tax the finances of the Society beyond conservatism.

"I would earnestly suggest that the Council consider the possibility and advisability of using the very large exchange of medical journals, both in this country and abroad, and

the latest books received as a nucleus for the formation of a library in connection with the Michigan State Medical Society. I would also suggest that the Council appoint a custodian of the journals and other material now in the hands of the Secretary-Editor, and recommend to the House of Delegates the election of a Librarian.

"The membership of the County Societies as a whole shows a slight increase. The total circulation, today, of the Journal to members is 1,854, being an increase during the year of 76.

"At the last meeting of the Council I was instructed to issue to the Secretaries of the various County Medical Societies a report blank, which is ideal in character; such reports to be tabulated by the General Secretary for the information of the Council at this meeting. I regret to state that a sufficient number has not at this date been received to warrant any definite tabulation, and I submit these twenty-five as received. The constant change of officers of County Medical Societies renders a more exact reporting almost impossible, until by years of experience all who assume the obligations of office shall realize the necessity of business-like reports. Many of the County Secretaries are very prompt in all matters pertaining to their own society and the State; others do not know what business methods are. A Card-Index system has been inaugurated in this office, which when completed will enable the Secretary to report definitely upon the membership of each County Society.

"While many believe that the value of the organization rests with the County Medical Society and that the meeting of the State Medical Society, occurring but once a year, is merely an incident, I believe that it is a most important factor in keeping alive organization and interest. It is, therefore, our duty to do all possible to render its gathering as profitable and attractive as possible, and I would ask for the consideration of the following problems:

1. Is the three days' meeting of the State Society a success?

2. Would it be better to abolish the orations; have the House of Delegates meet the evening before; and have the Scientific Sessions limited to two days?

3. What arrangements can be made to secure better attendance upon the Section meetings?

4. What arrangements can be made to hold



the members in attendance upon the afternoon of the last day?

5. Shall we return to the former method of reporting discussions of papers in the sections?

"In closing I deem it my privilege to express to you my sincere appreciation of the confidence you have imposed in me during the trying period of reorganization, and of the aid you have always extended me in every matter which I have brought to your attention. I desire also to express my thanks to the various officers and members of the State and County Medical Societies, and to those who have worked with me in the building up of our Journal. The work has been very arduous and never could have been accomplished had you not extended to me every courtesy within your power. My reward has been the satisfaction I feel that I have met in a slight degree at least with your approval, and my greater reward has been the intimate friendship with the officers of the various societies and the acquaintance of the profession at large.

"In relinquishing the office I wish it thoroughly understood that I do not relinquish my interest in the work but simply the responsibility of detail, which advancing years and other duties, both professional and personal, demand. I am ready ever to serve you in any possible way agreeable to you."

Respectfully,

A. P. BIDDLE,  
General Secretary.

President Inglis asked the opinion of the Council as to the reply he should make to a letter he had recently received from the Secretary of Kent County Medical Society asking his advice as to the propriety of accepting an invitation from the Homeopathic Medical Society in Grand Rapids to meet with them in joint session. After some discussion a committee was appointed to consider the relation which our organization bears to the homeopathic and other organizations. Chair appointed Drs. Herdman, Dodge and Bulson as this committee.

Here a recess was declared for luncheon.

#### AFTERNOON SESSION.

Dr. Dodge, Chairman of Financial Committee, reported that the committee had examined the books of the Secretary and Treasurer for the year 1905 and found the same to-

gether with the reports submitted correct; and recommended that the discussions of section meetings of the State Society be reported at the coming Jackson Meeting. Report accepted and adopted.

Dr. Haughey, Chairman of Committee on County Societies, submitted a report substantially embracing the recommendations made in the reports of the General Secretary and Secretary of the Council. Report accepted and adopted.

The Publication Committee submitted a portion of its report and asked for more time, which was granted.

Reports were then received from the several Councilors as to conditions in their respective districts, which showed the work throughout the state to be in good condition and advancing in scientific interest. Among other things Dr. Dodge presented a letter from Dr. McCormick, National Organizer, stating that he would be glad to visit Michigan if it could be arranged so that he could go from one district to another as rapidly as possible, and moved that the matter be referred to the Secretary of the State Society with the request that he endeavor to make out such itinerary. Supported and carried.

This closed the routine business and the Council proceeded to the election of Secretary and Treasurer of the State Society, which resulted in the choice of Dr. B. R. Schenck, State Secretary, and Dr. Geo. W. Moran, Treasurer.

Dr. Dodge moved that the Secretary-Editor and Publication Committee be instructed to advertise for bids for printing the Journal and, all questions of economy being duly considered, let the contract to the lowest responsible bidder. Carried.

A resolution of thanks was extended to Collier's Weekly and Ladies' Home Journal for the unselfish interest in the public weal displayed in their forceful and determined attacks upon nostrums and nostrum vendors.

Dr. Schenck was here introduced and thanked the Council for the honors conferred upon him by electing him to the office of State Secretary.

This closed one of the most successful and satisfactory sessions of the Council that has ever been held, in which more business was transacted in shorter time than at any previous meeting.

W. H. HAUGHEY,  
Secretary of Council.

CHANGES IN MEMBERSHIP NOV. 1ST TO JAN. 1,  
1906.

NEW MEMBERS.

Ladooski, R. J., Detroit.  
 Worden, A. L., Detroit.  
 Babcock, W. L., Detroit.  
 Pearson, Hamburg.  
 McGarvagh, J., Fowlerville.  
 Erwin, W. H., Oak Grove.  
 Huber, E. G., Iosco.  
 McClellan, Lela French, Benton Harbor.  
 Emmons, J. W., Buchanan.  
 Barstow, W. E., St. Louis.  
 Stealey, Albert, Alma.  
 Enders, W. H., Eaton Rapids.  
 Ellis, C. W., Eaton Rapids.  
 Starker, C. T., Saginaw.  
 Johnston, O. G., Otter Lake.  
 Hubel, J., Detroit.  
 McComber, A., Detroit.  
 Eastabrook, B. R., Reech.  
 Moir, A. J., Detroit.  
 Caughey, M. D., Detroit.  
 Aronstam, N. E., Detroit.  
 Stockwell, G. W., Detroit.  
 McGraw, Theo., Jr., Detroit.  
 King, H. H., Colling.  
 Sugnet, W. J., Gagetown.  
 Robertson, Colin G., Sandusky.  
 Weed, J. W., Brown City.  
 Tweedale, A. W., Shalbona.  
 Long, D. G., Eaton Rapids.  
 Gordon, Homer E., Hamburg.  
 Franklin, B. L., Millbrook.  
 Watley, Samuel, Blanchard.  
 Long, Chas. B., Fremont.  
 Ellison, Gayfree, Muskegon.  
 Powers, Lunette I., Muskegon.  
 Griffen, W. L., Shelby.  
 Davidson, R. J., Shelby.  
 Gillott, H. C., Pontiac.  
 Conlen, J. E., Munith.  
 Cochran, L. E., Peck.  
 Lewis, Henry J., Chicago, Ill.  
 Murphy, Norman D., Bangor.  
 Payne, E. M., Grand Ledge.  
 Larson, John, Negaunee.  
 Mohler, C. D., Hastings.  
 Francis, A. M., Port Arthur.  
 Hill, S. R., Greenlief.  
 Simpson, Dr., Harbor Beach.  
 Osborne, Samuel, Lansing.  
 Penoyer, Frank, South Haven.  
 Browning, Eugene S., Grand Rapids.  
 Culver, M., Battle Creek.

Kesley, E. H., Battle Creek.  
 Gates, G. A., Battle Creek.  
 Hodges, Lenna, Tekonsha.  
 Marsh, W. C., Albion.  
 Foster, J. C., Albion.  
 Tompson, J. A., Homer.  
 Maxwell, W. A., Hudsonville.  
 Boot, T. A., Holland.  
 Eames, Lucy N., Muskegon.  
 Gray, E. G., Ludington.  
 Bradley, J. B., Grand Ledge.  
 Niles, B. D., Grand Ledge.  
 Peppler, J. F., Graafschaaf.

CHANGE OF ADDRESS.

Bishop, W., Salt Lake City, Utah.  
 Banks, H. W., Springport.  
 Pearson, C. B., Schwartz Creek.  
 Eaton, R. R., Lowell.  
 Redner, L. R., Dayton, Wash.  
 Kirton, J. R. W., Laurium.  
 Fralick, F. J., Greenville.  
 Elmer, W. P., St. Louis, Mo.  
 Roneburger, G. F., Milwaukee, Wis.  
 Carr, Henrietta A., Ashtabula, O.  
 Hawkey, J. W., Alanson.  
 Harris, D. C., Frontier.  
 Logan, Chas. W., Detour.  
 West, Arthur E., Pasadena, Cal.  
 Howard, J. J., Detroit.  
 Harper, Wm. A., Detroit.  
 Bottom, C. N., Birch.  
 Sheffield, F. G., Hastings.  
 Roos, D. W., Manistique.  
 Kingsley, A. F., Battle Creek.  
 Cook, D. G., Holland.  
 Imus, H. L., West Olive.

CLINICAL ASPECTS OF RHEUMATIC  
ENDOCARDITIS.

J. D. Morgan calls attention to the necessity for greater care in the examination of patients having acute articular rheumatism in order to detect immediate or remote endocardial disease at an early date. Both patient and physician he says, often remain long unaware of any cardiac lesion. An investigation of the records of several hospitals and dispensaries showed that about 15 per cent. of cases suffering from rheumatism were systematically examined. The proportion of heart lesions following rheumatic attacks is about 50 per cent. Another feature of interest shown was the greater preponderance of rheumatic patients in dispensary rather than in hospital work owing to tendency of rheumatics to keep up and about as long as possible. While there were three times as many women with rheumatism in the hospital wards as in dispensaries, there were double the number of men seeking dispensary treatment for the same disease as there were in the institutions.—*Medical Record*, January 13, 1906.

## Book Notices.

**A COMPEND OF MEDICAL CHEMISTRY.** Inorganic and organic, including urinary analysis by Henry Leffman, A.M., M.D., Professor of Chemistry in the Woman's Medical College of Pennsylvania, and in the Wagner Free Institute of Science. Fifth revised edition. P. Blakiston's Sons & Co., Philadelphia, 1905. Cloth, \$1.00 net.

This little volume is very well gotten up, and is a complete one for a compend. This is vouched for by the fact that it is now in its fifth edition. The author in his preface defends the use of compends as follows: "It has been said that Alexander Pope is a poet whom everybody quotes and nobody reads. It may be said of compends that they are books that most professors and reviewers condemn and that nearly all students use. The truth is, that in the present systems in professional schools, students are obliged to meet two distinct requirements. They must study for the knowledge necessary for the practice of the profession and they must study to pass examinations. The latter are in so many cases arbitrary in scope, and affected by the personal equation of the examiner, that the student cannot be blamed for resorting to a concise presentation of the more important facts of the science, supplementing this by notes of the narrower and more strictly personal items of the teaching." The author also defends his selection of the title, "Medical Chemistry," by stating that the student of medicine needs a different presentation of the subject of chemistry than the student of engineering, for instance, even though the fundamentals of the science are the same. He believes that there is much to the subject that is not necessary to the medical man, and that the best way to teach the subject to this class of students is to use a carefully arranged text book that eliminates much of the foreign matter. The book should receive a wide circulation among those for whom it is intended.

**GALL-STONES AND THEIR SURGICAL TREATMENT.** By B. G. A. Moynihan, M.S. (London), F. R. C. S., Senior Assistant Surgeon to Leeds General Infirmary, Leeds, England. Second edition, revised and enlarged. Octavo of 458 pages, beautifully illustrated. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, \$5.00 net; Half Morocco, \$6.00 net.

The first edition of Mr. Moynihan's work on gall-stones was completely exhausted in eight months. Mr. Moynihan, by his masterly presentation of operative technic and clear, logical discussion of indications and contraindications, has won an enviable place in contemporary abdominal surgery. In this edition, increased in size by some seventy pages, many additional case records have been incorporated and a number of new illustrations added. We note also the addition of a very valuable chapter—Congenital Abnormalities

of the Gall-Bladder and Bile-Ducts. It is evident that the whole text has undergone a careful revision and all recent work along the line of gall-stone surgery included. Mr. Moynihan's book still holds first place in its field. The illustrations are very beautiful, especially the nine colored plates.

**DOSE-BOOK AND MANUAL OF PRESCRIPTION WRITING:** with a List of the Official Drugs and Preparations, and the more important Newer Remedies. By E. O. Thornton, M.D., Assistant Professor of Materia Medica, Jefferson Medical College, Philadelphia. Third edition, revised and enlarged, 12mo, 392 pages, illustrated. Philadelphia and London: W. B. Saunders & Company, 1905. Bound in flexible leather, \$2.00 net.

A glance at the contents of Dr. Thornton's book fully explains its attainment of a third edition. In addition to the consideration of the official and the more important nonofficial preparations intended for internal administration, weights and measures, solubilities, and incompatibilities, attention is given to the grammatic construction of prescriptions, illustrated by examples. In revising the text for this edition Dr. Thornton has made it conform with the new (1905) Pharmacopeia, the radical change in strength or name of many chemicals, drugs, and preparations already official, and the admission of many newer remedies necessitating the rewriting of a number of sections. We notice in the Appendix an addition of much value—a table showing the change in strength of important preparations, and also a list of average doses for adults in accordance with the new Pharmacopeia. Dr. Thornton's Dose-book is, as it always has been, accurate and up to date.

### SAUNDER'S QUESTION COMPENDS.

**ESSENTIALS OF MATERIA MEDICA, THERAPEUTICS, AND PRESCRIPTION WRITING.** By Henry Morris, M.D., College of Physicians, Philadelphia. Seventh Edition, Thoroughly Revised. By W. A. Bastedo, Ph.G., M.D., Instructor in Materia Medica and Pharmacology at the Columbia University (College of Physicians and Surgeons), New York City. 12mo, 300 pages. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, \$1.00 net.

The student cannot find a better or more practical work on Materia Medica, Therapeutics, and Prescription Writing than this little essential from the press of W. B. Saunders and Company. But then, this work is no exception in this respect to all the other numbers of this excellent series of compends. Dr. Bastedo, in revising the book for this seventh edition, has brought it in accord with the new (1905) Pharmacopeia, introducing all the new remedies and carefully indicating their therapeutic doses and uses. For a work of three hundred pages it contains a mine of information so presented as to be easily grasped. We give it our unqualified endorsement.



A TEXT-BOOK ON MODERN MATERIA MEDICA AND THERAPEUTICS. By A. A. Stevens, A.M., M.D., Lecturer on Physical Diagnosis, University of Pennsylvania; Professor of Pathology, Woman's Medical College of Philadelphia. Fourth Edition, Revised. Octavo of 670 pages. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, \$3.50 net.

The new fourth edition of Dr. Stevens' excellent work on practical therapeutics appears at a most opportune time, close upon the issuance of the Eighth Decennial Revision of the Pharmacopoeia to which it has been adapted. Dr. Stevens, by his extensive teaching experience, has acquired a clear, concise diction that adds greatly to his work's pre-eminence. New articles have been added on Scopolamin, Ethyl Chlorid, Theocin, Verronal, and Radium, besides much new matter to the section on Radiotherapy. The numerous changes in name or strength of various drugs and preparations, as called for by the new Pharmacopoeia, have also been made. In fact, it is somewhat difficult to speak of Dr. Stevens' Therapeutics without resorting to the frequent use of superlatives, for of all the good works on this most important of subjects, this book before us is undoubtedly the very best.

FEEDING RULES FOR HEALTHY INFANTS. By Charles Douglas, M.D., Professor of Children's Diseases and Clinical Medicine, Detroit College of Medicine; Consulting Physician to Harper Hospital; Senior Physician to the Protestant Orphan Asylum; Member of the Ohio State Pediatric Society; American Medical Association and Michigan State Medical Society. Educational and Recording Charts showing practical percentage feeding without Laboratory Assistance. Baby Book Co., Publishers, Detroit Mich., 1906. Net \$1.00, at J. F. Hartz & Co., and A. Kuhlman & Co., of Detroit.

This book treats all the different phases in nursing and hand fed infants. It shows hand feeding done with many varieties of cow's milk, and is unique inasmuch as it presents the combined results of many mothers educated by the author to feed properly. His chart system whereby these mothers note daily all foods and their effects, has accumulated a large amount of information, from which this book is largely compiled. Many new features have, in this way, been worked out, thus greatly simplifying the art of hand feeding.

The seven food schedules show the foods given every week, the age of the infants, and the resulting advances in weight. In this way, a suitable diet for infants at any weight and age can be seen at once.

The book contains 279 pages of reading matter divided into ten chapters. To help the reader, the author has made the ninth chapter a summary in condensed form of all the facts in the previous eight chapters. The tenth chapter treats of the dietary of infants during the second and third years.

The book is written in a clear and easily under-

stood language, and would seem to be invaluable to a mother who has trouble with the feeding of her baby and also to the physician who practices among the very young. We bespeak for the book the great success which it so well merits, and congratulate the author upon the attempt to put before the mothers of America some tangible method by which they can raise their little ones, even when the advantages of a laboratory are denied them.

DIFFERENTIAL DIAGNOSIS AND TREATMENT OF DISEASE, A Text Book for Practitioners and Advanced Students, by August Caille, M. D., Fellow of the New York Academy of Medicine; Member and Ex-President of the American Pediatric Society; Professor of Diseases of Children; New York Post-Graduate Medical School and Hospital; Visiting Physician to the New York Post-Graduate and German Hospitals; Consulting Physician to Isabella Home and Hospital, etc. 228 Illustrations in the text. Cloth \$6.00 net. D. Appleton & Company, publishers, New York and London, 1906.

Dr. Caille's book represents an attempt to re-establish the various branches of medicine in their true relation, side by side, as they should be of use to the general practitioner, rather than the specialist. The different diseased conditions in the whole range of medicine and surgery are handled in a concise and clear manner. The subheadings are printed in heavy faced type, making reference easy. All non-essential detail and especially the speculative detail is omitted, making this work of especial advantage to the busy practitioner. The book is especially strong in the matter of treatment, giving treatment that has been tried and proved rather than theoretical. Reference is easy, owing to a remarkably good index. A short synopsis of the contents of the book is here given.

INTRODUCTION: The Requisites of the General Practitioner, his relation to the community and to specialism.

1. Technique of Diagnosis and the Clinical Laboratory.

2. General Therapeutics.

3. Pediatrics.

4. THE DIGESTIVE SYSTEM: Nutrition and Diet, Diseases of the Organs of Digestion, Gastrological and Proctological Memoranda.

5. THE CIRCULATORY SYSTEM: Diseases of the Organs of Circulation, of the Blood, the Lymphatic System, Management of Dropsy and Effusion.

6. THE RESPIRATORY SYSTEM: Diseases of the Organs of Respiration, Rhinology and Laryngological Memoranda and Formulary.

7. THE GENITO-URINARY SYSTEM:

Diseases of the Genito-Urinary Organs, Urological and Gynecological Memoranda.

8. Diseases of the Bones, Muscles, Joints, Orthopedic Memoranda. Remarks on Massage, Vibration, Dry Hot-Air Treatment.

9. Infective Fevers and Methods of Prevention and Disinfection.

10. Faulty Metabolism and Diseases of the Ductless Glands.

11. Neurological Memoranda. Remarks on Electricity and its Therapeutic Uses.

12. Dermatological Memoranda and Formulary.

13. Ophthalmological and Otological Memoranda and Formulary.

14. Anaesthesia, Poisons and Antidotes, and Miscellaneous Disorders.

15. Keeping Case Records and Accounts.

16. Index.

MAN AND HIS POISONS, A Practical Exposition of the Causes, Symptoms and Treatment of Self-Poisoning, by Albert Abrams, A. M., M. D. (Heidelberg), F. R. M. S., Consulting Physician Denver National Hospital for Consumptives, The Mount Zion and the French Hospitals, San Francisco; President of the Emmanuel Sisterhood Polyclinic; Formerly Professor of Pathology and Director of the Medical Clinic, Cooper Medical College, San Francisco. Illustrated. New York, E. B. Treat & Company, 1906. Cloth, \$1.50.

In the first chapter Dr. Abrams gives the various views of life, the Chemistry of life, the experiments of various investigators as regards the different functions of life. He treats further in the book of the antecedent history of self poisoning, and dwells especially upon the power of the mind over the body in the matter of self poisoning and disease. Fatigue, the toxicology of emotion and sleep, and the chemistry and physics of thought are considered at length. The symptoms of self poisoning are presented in a manner in keeping with the careful arrangement and presentation of the facts throughout the book. Under the treatment of self poisoning especial confidence is placed in the sinusoidal current. The book is well written, attractive in appearance, of a convenient size, printed from clear, easily legible type, and contains 258 pages, with many original illustrations.

THE DIAGNOSTICS OF INTERNAL MEDICINE. A clinical Treatise on the Recognized Principles of Medical Diagnosis, prepared for the use of students and practitioners of Medicine. By Glentworth Reeve Butler, Sc. D., M. D., Chief of the Second Medical Division, Methodist Episcopal Hospital; Attending Physician to the Brooklyn Hospital; Consulting Physician to the Bushwick Central Hospital; Formerly Associate Physician, Departments of the Diseases of the Chest and Diseases of Children, St. Mary's Hospital, Brooklyn; Fellow of the New York Academy of Medicine; Member of the Medical Society of the County of Kings; Fellow of the Society of Science, Letters and Arts

(London), etc. Second revised edition. D. Appleton & Company, New York and London, 1906.

This book is devoted entirely to diagnosis, and draws upon all branches of science which will aid. It is divided into two parts. Part I takes up in detail the signs, symptoms, facies, etc., of disease, discusses them, gives the method of eliciting them and gives their significance, with the diseases which they might suggest. Whenever a plate or diagram will help in making a point clear that plate or diagram is used, no expense being spared to make a thoroughly up-to-date and reliable work. The microscopical examination of the urine, feces, stomach contents, sputum, and blood are dwelt upon at some length.

Part II discusses the different diseases and gives their symptom complexes, referring to part I when necessary. The direct and differential diagnosis is gone into in detail, with a word or so occasionally about prognosis. For a work on diagnosis this is one of unusual merit, and the subject matter is exceedingly well handled as regards its selection, arrangement, and presentation. The book is attractively bound, printed in good readable type, and profusely illustrated.

## SURGICAL SUGGESTIONS.

Gastric lavage is the best post-operative anti-emetic.

In cases of unaccountable fever, especially in children, never fail to examine the ear.

If a male patient with supposed strangulated hernia complains of pain running down the inner aspect of the thigh it is well to think of torsion of the testicle.

After an operation for hemorrhoids it is desirable to insert into the rectum a tampon canula, made by smearing with vaseline gauze layers wrapped about a piece of rubber tubing about three inches long and transfixed at its distal extremity with a large safety pin. The tampon canula prevents oozing by its gentle pressure, allows any considerable hemorrhage to show itself externally, makes the escape of flatus painless and the introduction of an oil enema easy.

Examine the rectum in all cases of tumor of

the liver. Likewise, before operating for cancer of the rectum extirpate the liver for metastasis.—*American Journal of Surgery.*



## Progress of Medical Science.

### MEDICINE.

**Exile and Drugs in the Treatment of Tuberculosis.**—A. Jacobi (New York) says the treatment of tuberculosis should be hygienic, dietetic and medicinal. Pure air and good food, and enough of it, are indispensable. That is what sanatoria are erected for. But their number is small compared with the vast number of cases of incipient and advanced tuberculosis. It is mainly the latter that disseminate and propagate the disease; it is these patients who should be taken care of at public expense in behalf of the protection of the public at large. Removal from the airless and lightless dwellings of large cities is, when possible, a necessity. Young men with no families depending on them should be advised to go south or southwest and to make a living there. Advanced cases, and those patients unable to find work, amongst the poor, should not be told they must leave. They have not the means to travel or live in "Colorada," "Denver," "the mountains," and to tell them, as it is done too often, their case is hopeless unless they change climate immediately, is reckless and cruel, and unworthy of a physician not deprived of conscience and humanitarian instinct. A poor consumptive, when about to die, should rather die amongst his own than in the streets or the attics of a strange town thousands of miles away. Even the tuberculous and the consumptive patients (the terms are not synonymous by any means) may be benefited at home. Cod liver oil is probably active beyond its effect as a fat. Arsenic is a good tissue builder and may be given in moderate doses (the trioxid-arsenous acid) for many months in succession. It has been considered as a "nutritive" for generations. Cardiac stimulants should be taken regularly for indefinite periods, for instance the equivalent of 3, 4 or 5 grains of the herb daily, divided into 3 or 4 doses—no "cumulation" need be feared—or spartein sulphate 2 to 5 grains daily (which are easily borne and readily eliminated.) For 15 years past guaiacol has been given by the author in thousands of cases, with good results. Expectoration becomes more mucus, cough looser, and weight increases. All that happens in the average cases amongst the poor, and should not be neglected by the rich, and by the sanatoria, which should add medication to their hygienic and dietetic (and gentle gymnastic) and cautious hydropathic treatment. Max Schöller, who has introduced guaiacol into the treatment of tuberculosis forty-five years ago, employs it also in tuberculosis of the bones and joints, inter-

nally and, with iodoform and glycerin, in injections. Lately he published two bad cases of renal tuberculosis which got well under protracted guaiacol treatment without an operation. The author never relies on local treatment alone in chronic osteitis and arthritis.—*American Medicine*, December 23, 1905.

**Tonsillitis.**—R. M. Niles, in discussing the treatment of this affection, says that the patient should be isolated, should receive broken doses of calomel, followed by a saline laxative or croton oil, quinine in tonic doses. Strychnine, aconitine, sodium salicylate, guaiac and anodynes may also be required. Hot alkaline gargles and a spray of hydrogen peroxide are useful. Chlorate of potassium has little value. Often the application of the tincture or vinegar of capsicum produces the most brilliant results. Congestion and edema are reduced, the separation of sloughs is facilitated, granulations are stimulated, vasomotor inertia is overcome, and normal tissue metabolism is re-established. Tincture of capsicum, full strength or diluted with cod-liver oil should be applied to the Schneiderian mucous membranes in the treatment of the rhinitis, which is a frequent concomitant of the tonsillar involvement. The nasal mucosa is first cocaineized, and the capsicum is then applied with a cotton-covered applicator.—*Medical Record*, December 23, 1905.

**The Treatment of Bronchopneumonia.**—Samuel A. Visanska says that the first requisite is to get the confidence of the family. Abundant fresh air must be secured by having the windows opened above and below, and if possible an apartment with a fireplace should be chosen as the sick room. Of the many external applications recommended he prefers the hot mustard bath. The child should remain in it till there is a pink glow over the body, and should then be wrapped in a blanket and placed in bed, when, as a rule, it falls asleep. At the same time the high nervous tension is relieved, the child breathes more easily, the pulse is not so rapid, the capillaries dilate, and the little patient often breaks out in a copious perspiration, which carries off the toxins, thereby throwing less work on the heart, kidneys, and intestinal canal. These baths should be repeated as often as necessary. Hot camphorated oil, with mustard rubbed into the chest, is an efficient application if pleurisy is a prominent symptom. Several prescriptions for cough mixtures are given. Whiskey and strychnine are the two preferable stimulants, and when the pulse is above 130 tincture of digitalis is used, which has proved very valuable in the author's experience. It is advisable not to give the patient any water for several minutes after swallowing the dose of digitalis, which may be administered in a few drops of syrup, as water precipitates digitoxin. If the child is not breast-fed, broth, beef, milk, and egg albumen will constitute the principal articles of diet.—*Medical Record*, December 16, 1905.



## SURGERY.

**Displacement of the Abdominal Organs.**—

Otto Lerch in considering the subject of prolapse of the various abdominal organs lays much stress on the neurotic element both in the etiology and symptomatology. The affection may be congenital and is often hereditary; it is most frequently predisposed to by relaxation of the abdominal found in all cases, and nervous symptoms pre-walls, such as often follows childbirth. The disturbance of the nervous system is practically sending the picture of hysteria and neurasthenia are always present. The trouble can only be developed on an inherited basis of neuropathic constitution. After describing the protean nature of the symptoms attending displacement of the stomach, colon, kidneys, liver, or uterus, the author presents several case histories illustrating pronounced phases of these disorders. The treatment, he says, should be prophylactic by means of abdominal exercises and the use of a bandage if predisposition is recognized, and the same two measures must be employed if the trouble is already present. The author describes his own bandage, which is provided with anterior and posterior pads and with leg straps. Diet adapted to the condition of the stomach and intended to replace the lost fat, and rest, are the next requisites, as well as massage and mild hydrotherapeutic measures. Tonics and suitable exercise are also of value. The advisability of operative treatment requires careful consideration, for often the visceral dislocation is only part of the trouble, for the severity of the suffering does not depend on the degree of dislocation, and correcting operations have been in many cases without any or without permanent result. If the defect to be corrected contributes to the trouble, and medical treatment has failed, an operation is indicated.—*Medical Record*, December 9, 1905.

**Postoperative Nausea and Vomiting.**—

Lawrence E. Holmes (Asheville, N. C.) from a study of a series of 100 cases concludes that, as a rule, postoperative nausea and vomiting are less dependent on the anesthetic than on other causes; for instance, sex, or a nervous disposition. The amount of postoperative disturbance seems to bear a more or less definite relation to the nature of the operation. The common teaching that the administration of ether is followed by nausea and vomiting much more frequently than is chloroform is to a great extent erroneous. The proper preparation of the patient has much to do with the after-effects, and the after-treatment is of the utmost importance. The degree of gastric

disturbance following etherization has no relation whatsoever to the amount of ether used.—*American Medicine*, December 23, 1905.

**The Dumb Bell Intestinal Anastomosis.**—

J. B. Bacon, Macomb, Ill. (*Journal A. M. A.*, January 6), describes a new device for intestinal anastomosis, consisting of a hollow, dumb bell shaped aluminum bobbin, over which the invaginated intestinal walls are tied through a counter opening which is afterward sutured. Detailed descriptions are given of the methods for the various kinds of anastomosis, end to end, lateral and gastroduodenal. The following advantages are claimed for the appliance: Simplicity of construction and operation; absolute safety against leakage; quickness of application; impossibility of lodgement in the intestine; non-necessity of reinforced sutures; minimal amount of cicatricial tissue remaining. The article is illustrated.

**The Short Narcosis, the Short Incision and the Short Stay in Bed After Ideal Operations.**—

Bayard Holmes (Chicago, Ill.), from a wide experience, has become a strong advocate of short narcosis, short incision and short stay in bed after ideal operations. He believes too much time is often spent by the patient on his back after operation, and too little by the surgeon at the bedside and in the laboratory before the operation. In order to make the stay of the patient short after surgical intervention, he should be studied in the hospital for days or even weeks before operation is undertaken. Dr. Holmes has found that patients can readily be kept anesthetized the necessary 20 minutes or half an hour by the employment of gas with only occasional resort to ether. In a few instances, on account of obesity, chloroform has been used to continue the anesthesia. The short incision is one of the dictates of good surgical judgment, as it inflicts the minimum amount of traumatism and gives adequate access to the field of operation. With the small incision, the complications which the protrusion of abdominal viscera add to the operation are unknown. Operators who have been accustomed to use incisions 4 inches to 6 inches long are surprised to find that they are able to accomplish the same results more rapidly, with less traumatism and with fewer postoperative discomforts to the patient with an incision 2 inches long or 1½ inches long. The duration of the operation is curtailed, the intoxication and the discomforts of the anesthetic are lessened, the danger of hernia is minimized, the necessity of a long stay in bed is obviated, the chances of infection through the introduction of many stitches diminished.—*American Medicine*, December 16, 1905.

## GYNECOLOGY AND OBSTETRICS.

**Pelvic Measurements in Women.**—Ella V. Davis, Chicago (*Journal A. M. A.*, December 2) analyzes and discusses the pelvic measurements of 150 women, 105 American and 45 foreign born. Over 82 per cent. were normal in their measurements, and somewhat over 17 per cent. (26) were deformed. Her general conclusions are: "Deformity occurs often enough to make pelvimetry a practical part of the examination of pregnant women. Generally contracted pelves form by far the most common deformity in American women, though the rachitic pelvis is often present in those who have been artificially or imperfectly breast fed in infancy. Inebriety in the parents is the most constant element toward degenerate types in the deformities studied. The size of the infant can be regulated by diet and exercise if this be carried out strictly for a proper time during the last three or four months of pregnancy." Tables of the various data, pelvic measurements, character of labors, family history of deformed patients, etc., are included in the paper.

**Antepartum Measurement of the Fetal Head.**—W. S. Stone describes as follows his method of measuring the fetal head through the abdominal walls: The patient is placed in the ordinary dorsal position for an abdominal examination, and the examiner, standing by the side and facing the lower end of the patient's body, first carefully palpates and makes out the position of the head. If it is already engaged in the pelvis, it will not be practicable to measure it, but in such cases it naturally is unnecessary. The occipital and frontal poles are then grasped between the two hands, and an assistant places from below the ends of the pelvimeter between the terminal phalanges of the middle and ring fingers of the examiner, pushing them firmly inward, as the examiner directs. It is essential that the ends of the pelvimeter go between these fingers, because in palpation one naturally places the middle or longest finger nearest the two poles from which the measurements are to be taken. If placed in front of the middle finger, the pelvimeter will slide forward and the measurement will be inaccurate. An assistant or nurse is necessary in order to obtain the best results, in order that the examiner's fingers may be entirely free to accurately locate the fetal parts. A table is given showing the results obtained before and after delivery in forty-one cases measured in this way. In twenty-eight instances the postpartum measurement of the occipitofrontal diameter agreed exactly with the measurements made through the abdominal walls be-

fore labor; in eleven there was an error of 0.25 cm.; in two of 0.50 cm. In another table the average amount to be deducted from each occipitofrontal diameter in order to obtain the biparietal diameter is given. The method is said to be of the greatest utility in determining the nature of the obstetric operation to be practised, and also in determining early in pregnancy whether or not to wait for full term.—*Medical Record*, November 4, 1905.

**Modern Obstetric Methods.**—J. A. McKenna, Lansdowne, Pa. (*Journal A. M. A.*, December 16), criticizes meddling midwifery, and particularly some recent utterances. Besides the use of thorough asepsis, he emphasizes the following as points deduced from his personal experience: To deliver all cases in the dorsal position, to support the head and perineum by a modification of Merkittschiantz's method, which reduces the danger of lacerations to a minimum, and especially to have the fundus of the uterus grasped before the presenting part is born, and firmly held until the child is delivered and the cord tied. This, he considers, has been the cause of his never having any postpartum hemorrhages, and says that in the great majority of cases it has facilitated the extraction of the placenta. He gives no douches, and he has only used the forceps twice since leaving the maternity hospital shortly after graduation. He has never had to put more than two stitches in any perineal tear. Another important point emphasized is the position of the patient in bed. In most puerperal cases there is a tendency to burrow down and to have the hips and vagina at the lowest point so that septic fluids in the bed or stagnant in the vagina can the more easily infect the womb. To obviate this he keeps the hips well raised from the bed during the whole course of the labor, thus preventing any contamination from return flow of liquids.

**Indications and Contraindications to the Use of the Obstetric Forceps.**—J. Thompson Schell (Philadelphia), in discussing the indications for the use of the forceps, says that the disproportion between the expulsion force and the pelvic resistance is the chief and most frequent indication, and that a certain amount of experience with a good deal of common sense is necessary to be always able correctly to pick the proper time for their application. As to the contraindications to their use, in cases of hydrocephalic or macerated heads, the forceps are very likely to slip, and these can better be managed by a perforator and the use of the cephalotribe. A head freely movable at the brim should not be considered as calling for the use of the forceps, as version is the first operation.—*American Medicine*, December 30, 1905.



## OPHTHALMOLOGY AND OTOTOLOGY.

**On Certain Forms of Ocular Tuberculosis.**

—Charles Stedman Bull says that tuberculosis of the conjunctiva is much more often a primary disease, the result of an ectogenic infection, even in cases where tuberculosis has already developed elsewhere in the body, than of infection occurring through the blood. But, although tuberculous disease of the conjunctiva is not often secondary to tuberculous disease in other parts of the system, yet it is itself liable to be the starting point of general tuberculosis. An intact normal conjunctiva can, however, never be infected. There must always be a loss of substance, usually a traumatic abrasion. Tuberculosis of the conjunctiva is more often secondary to nasal tuberculosis than primary. The symptomatology and treatment of tuberculosis in the various other anatomical regions of the eye are discussed in detail, and the author draws the following general conclusions: It is doubtful if any case of intra-ocular tuberculosis is ever a primary disease. In cases of doubt, or of very difficult diagnosis, the injection of tuberculin is an efficient aid to diagnosis. There is a general reaction in at least eighty-five per cent. of the cases, and some local reaction in about fifty per cent. of the cases. As a method of treatment, both the old and the new tuberculin have proved practically useless in the writer's experience. It is a remedy which needs careful watching. Surgical intervention in intra-ocular tuberculous conditions of the eye should seldom be done, unless there is considerable pain which tells on the patient's health, because the disease is not primary, and hence excision would remove only one focus of the disease.—*Medical Record*, December 9, 1905.

**New Test Types.**—C. H. Williams, Boston

(*Journal A. M. A.*, October 7), describes a set of test types on a plan first proposed by Dr. John Green, of St. Louis, and arranged according to geometrical progression as recommended by him. The series is more complete than that of the usual Snellen types, being a series of letters with equal intervals between the different lines, but the shapes of letters and most of the Snellen lines are preserved. The letters are arranged on reversible slats or a rotating card, which can be controlled by the operator; the letters are illuminated by a steady electric light. Each line of letters is printed in duplicate with a different arrangement of the letters when reversed; this is a new feature, in test types of this kind.

**Etiology of Pigmentous Sarcoma of the**

**Choroid.**—J. Hirschberg, Berlin (*Journal A. M. A.*, November 25), believes that malignant tumors, and pigmentous sarcoma of the choroid in particular, are due to various causes in differing types of the disease. He has before published reports of cases in which the sarcoma appeared to originate in congenital patches of pigmentation, and gives an account of a case in which a congenital circumscribed pigment spot in the iris gave rise to a melanotic sarcoma in the same region of the ciliary body of the affected eyeball. These facts, he remarks, agree with the pathologic observations of congenital pigment nevi of the cutis, changing as life advances into melanotic tumors, and with the theory of Cohnheim that congenital peculiarities of cell groups or persistencies of embryonal germs constitute the real predisposition to later development of malignant tumors.

**Tinnitus Aurium.**—First reporting a case in which operation was contemplated, but not carried out on account of the improvement of the patient, W. S. Bryant, New York (*Journal A. M. A.*, December 9), discusses the propriety of dividing or destroying the auditory nerve trunk for the relief of specially severe cases of tinnitus when it can be determined that this nerve is the seat of the disturbance. He describes a method of procedure suggested by Dr. Carlton Flynt, which he has followed a number of times on the cadaver and which he considers has certain special advantages; he also reviews the reported cases, reproducing some of them in rather considerable detail. He has reached the following conclusions: "1. Carefully selected cases of tinnitus, with nerve stimulus located in the peripheral end of the auditory nerve, offer a good prognosis for cessation of the tinnitus after the section of the eighth nerve. 2. A technic which offers little inconvenience from hemorrhage, no danger from bony spicules and a minimum of evil from compression of the cerebrum, or especially of the cerebellum, gives a good prognosis of recovery from the operation and in selected cases a cessation of the tinnitus. 3. If, after appropriate general and local treatment, grave tinnitus still exists, we are called on to recommend the section of the auditory nerve, provided the source of the tinnitus is believed to lie in the peripheral portion of the auditory nerve. 4. Section of the acoustic nerve will be as effective for the cure of aural vertigo as for peripheral tinnitus."



## NERVOUS DISEASES.

**Landry's Paralysis.**—R. McGregor, Saginaw, Mich. (*Journal A. M. A.*, December 9), reports an interesting case of Landry's paralysis, and discusses its etiology and pathology. While he considers it to be due to a toxemia, specially involving the anterior spinal horns, he thinks it probable that in very virulent intoxication the peripheral nerves may also be implicated in a secondary way, and a multiple neuritic condition co-exist. These are the cases that, perhaps, give most trouble in their diagnosis. The very high mortality of this disease, however, is in striking contrast with those disorders, multiple neuritis and anterior poliomyelitis, with which it is most liable to be confounded. In the case reported, the attack seemed to follow vaccination, it was preceded by chilly sensations, fever, sweatings and vertigo, and the rapidly ascending paralysis within a week from its first appearance had involved all four extremities, the muscles of speech and deglutition and the ocular muscles. There was also cardiac irregularity and dyspnea, but there was no pain or nerve tenderness, and no fever after the stage of onset. The patient slept well and took a fair amount of nourishment. The bulbar symptoms began to improve after two months, but recovery was not approximately complete until after two years and the patient has not yet attained his former weight by 30 pounds. There is still a slight foot-drop, most marked on the right and the knee jerks have not returned. In the treatment the best results seemed to follow the use of a simple solution of the glycerophosphate of iron with small doses of strychnia.

**Multiple Neuritis.**—D. I. Wolfstein, Cincinnati (*Journal A. M. A.*, December 9), gives reports of four cases of multiple neuritis illustrating the main etiologic types, i. e., those due to toxic agents, such as alcohol, mercury and lead; those due to acute infections; those connected with general diseased conditions of the body, such as rheumatism, diabetes and syphilis; and last, cases due to exposure to cold or developing apparently without determinable cause. He remarks on some points in the differential diagnosis, such as the involvement of motor fibers, the symmetrical character of the paralysis, the usually simultaneous affection of the legs and forearms, usually not extending to the thighs and upper arms and never except in fatal cases involving the abdominal and respiratory muscles. The prognosis, save in the acute grave cases, is relatively good. In patients with chronic alcohol or lead intoxication, with impaired constitutions,

we can hope for only a partial recovery, if any. Rest and appropriate nutrition are the principal indications in treatment. In the early stages the salicylates are useful. Light wrappings and soothing applications for the hyperesthesia are also of use. Special causal affections and intoxications, of course, call for appropriate treatment. Judgment is needed in case of alcoholism as to the continuance or withdrawal of the stimulant. With chronic cases strychnia, arsenic, gentle massage, and the galvanic current may be useful in aiding repair of the nerve and in keeping up the nutrition of the muscles.

**The Non-Insane Psychoneuroses.**—J. Punton, Kansas City (*Journal A. M. A.*, December 2), proposes the name "psychosomatasthenia" for a large class of morbid mental conditions, including certain hysterical, neurasthenic and various other neurotic manifestations, which, often occurring after exhausting bodily ailments, fall under the care and observation of the general practitioner rather than that of the specialist, and the importance of which is liable to be misunderstood. He considers these as the forerunners of insanity, differing only in degree. Their fundamental nature he considers to be the same, a pathologic lack of inhibitory control of the higher mental directive forces, with consequent nutritional cellular instinctive and physical defects which seriously mar the power of the will, weaken the judgment and intellect, as well as excite or depress the emotional attributes in all degrees of intensity. Their causes are similar, being both congenital and acquired, while heredity, stress and toxicity are the chief factors of each. The psychopathic manifestations dominate, direct the prognosis and most urgently call for treatment. They are curable in their incipency, but become incurable when neglected.

**Infantile Paralysis.**—P. Le Breton, M. D., Buffalo, N. Y. (*Journal A. M. A.*, January 6), describes the general and special methods and indications for the relief of the deformities and weaknesses resulting from anterior poliomyelitis after the subsidence of the acute stage. He lays down the general principles of treatment and applies them to the various special conditions. Each special deformity or paralysis is mentioned and the particular appliance or treatment required is pointed out, the object being to supplement the generally deficient data of the text-books and to give in concise form the latest methods and practical points of use to the practitioner. In conclusion the various operative methods, nerve and tendon transplantation, arthrodesis, and linear osteotomy are described with their special indications and modifications for different conditions. Le Breton insists on the importance of the physician foreseeing and preventing deformity as far as possible in these cases and of special individual treatment. The article is illustrated.

## THERAPEUTICS AND PHARMACOLOGY.

**Inhibitory and Anesthetic Properties of Magnesium Salts.**—S. J. Meltzer reports the results of a number of experiments conducted by himself and John Auer during some months past at the Rockefeller Institute. Of the four main inorganic constituents of the animal body—sodium, potassium, calcium, and magnesium—the effects upon nerve and muscle of only the first three have been very carefully studied, those of magnesium for some reason having hardly been considered at all. In studying the action of various substances injected into the brain Meltzer found that magnesium produced paralysis rather than convulsions. Pursuing this lead, he found that this element with its salts invariably caused depression or inhibition of nervous and muscular action. In a few seconds after the injection of a small dose of the sulphate or the chloride of magnesium respiration ceased and the animal would die without the struggle of asphyxia and without any sign of sensation unless artificial respiration was practiced for a long time. When injected rapidly, 0.1 of magnesium sulphate is profoundly toxic, but as much as 1.5 of the salt, if injected slowly in the course of an hour, will occasion no untoward symptoms. Herein is the probable explanation of the fact that Epsom salt, when taken in the ordinary way, produces no poisonous symptoms; some absorption doubtless occurs, but it occurs so slowly as to be harmless. In another series of experiments it was ascertained that solutions of magnesium salts applied directly to a nerve trunk caused a complete block, abolishing conduction entirely. In a third series it was found that by means of subcutaneous injection of magnesium salts complete general anesthesia, with perfect relaxation of the muscles, but without impairment of the vital reflexes, was produced. In a fourth series of experiments the magnesium salts were injected into the subarachnoid space of the spinal cord, mostly by lumbar puncture. Monkeys were the animals experimented upon. The injection of magnesium sulphate in a dose of about 0.06 per kilo of the animal's weight caused within a minute or two complete anesthesia and paralysis of the tail and hind legs. This discovery has been put to practical use in twelve operations performed under the influence of intraspinal injection of magnesium sulphate. The highest dose employed was 0.2 per kilo, or 15 drops of a 25 per cent. solution for each 20 pounds of body weight. In the first eight cases some chloroform was used to supplement the effect, as the tentative doses of the salt were very small, but in the last four the magnesium alone sufficed. The best time for operating was found to be three or four hours after the spinal injection. As a precautionary measure the author insists that the Fell-O'Dwyer apparatus for artificial respiration be on hand whenever this magnesium anesthesia is employed. Finally Meltzer reports the cure of a case of tetanus at Roosevelt Hospital. After the employment of 115 c. c. of tetanus antitoxin without effect, the

first injection of a solution of magnesium sulphate afforded great relief for thirty-six hours, and after a few more injections the patient was pronounced cured.—*Medical Record*, December 16, 1905.

**Behring's New Tuberculosis Remedy.**—A. C. Klebs, Chicago (*Journal A. M. A.*, December 16), remarks on the sensational element in Behring's announcement and also on the fact that there are some ambiguities of expression that he thinks may perhaps have been intentional. We must take it, he states, that Behring did not mean to say that the remedy he has discovered will cure tuberculosis in all its stages, but that it will prevent in those infected the development of destructive processes, i. e., phthisis. This accepted, he proceeds to analyze his theory of a curative principle. It seems that the curative principle is found in a well-defined constituent of the tubercle bacillus which Behring calls TC, the same designation as that given years ago by E. Klebs to his assumed curative principle contained in tubercle bacillus cultures. The healing action is exercised by the transformation of this TC within the living body cell into a hypothetical derivative which he calls TX because he does not know whether it is a ponderable body or not. A cellular immunity is thus produced, quite different from the ordinarily accepted humoral immunity, and Behring says his clear conception of this was derived from an acquaintance with Metchnikoff's work on phagocytosis. Experimental proofs of this, however, are not given. From Behring's sketch of the method of preparation, Klebs understands that the TC is obtained by grinding up what Behring calls the "rest bacillus," a product remaining after certain toxic and non-toxic groups of substances, including Koch's tuberculin, have been removed. Behring considers it of importance for the comprehension of the therapeutic TC action, that although incapable itself of reproduction, it can produce tubercles that do not caseify or soften, but heal spontaneously. From the above statement of the substance of Behring's address, Klebs deduces certain definite facts. First among these is the fact that Behring finds his curative principle pre-existent in the tubercle bacillus, and this implies a radical change from his formerly expressed views, and is, he claims, a brilliant vindication of the view persistently maintained by E. Klebs and substantiated by him in numerous tests in animals and men. Klebs sees the mechanism of the immunizing process of his TC in a bactericidal action. A. C. Klebs here thinks, from what he knows of Behring's previous studies, that it is probable that he also imagines a more or less direct bactericidal action to take place. On the whole, he says, "it seems probable that Behring's new method is based on principles that have already been more or less elaborated by others, especially by E. Klebs and Metchnikoff." "How much, ultimately, suffering mankind is to profit can not be predicted, nor can Behring's expressed, though carefully and ambiguously worded expectations mean anything but a plausible, by him yet unproven, hypothesis of a curative principle, applicable in human tuberculosis."



### DERMATOLOGY, SYPHILIS AND ROENT- GEN THERAPY.

**Cerebral Hereditary Syphilis.**—William J. Butler (Chicago, Ill.) says the nervous system is attacked by hereditary syphilis in a considerable proportion of cases, sometimes without cutaneous lesions, the disease remaining latent until puberty or later. The pathologic conditions include cranial osteosclerosis, periosteitis, meningitis, endarteritis, thrombosis, as well as atrophy, sclerosis and softening of the cerebral cortex. The symptoms are recurring convulsions, severe headache, worse at night, and impaired intelligence. Later the epilepsy may disappear. Hemiplegia frequently develops and the patients may become paralytic idiots. Partial motor paralyses, aphasia and disturbances of the special senses may occur. Mental deficiency, occasionally congenital, usually develops at a later period of childhood. Prognosis is unfavorable unless the condition is recognized and treated in its early stages. Congenital syphilis should be vigorously treated with mercury during the prevalence of cutaneous manifestations and, when nervous symptoms develop, potassium iodid, or if this disagrees, iron iodid, should be added.—*American Medicine*, December 9, 1905.

**Action of the Roentgen Rays Upon the Blood—An Experimental Study.**—Roger S. Morris (Ann Arbor, Mich.) studied the more immediate effects of moderately long exposures (3 to 5 hours) to the Roentgen rays upon the blood of rabbits and rats. After reviewing the work of previous experimenters and detailing his own results, he arrives at the following conclusions: 1. The Roentgen rays cause a marked diminution in the absolute number of leukocytes in the peripheral circulation. 2. Preceding the leukopenia there may be a moderate rise in the number of leukocytes 8 to 12 hours after the exposure, the increase being due largely to the greater number of polynuclears. 3. The lymphocytes are especially susceptible to the action of the rays. 4. Alterations in the histologic characters of the lymphocytes and polynuclear amphophiles may be found in the rabbit, similar to those described in the lymphoid tissue and bone marrow. 5. The harder the tube, the more pronounced the changes produced. 6. No changes in the red blood cells or hemoglobin take place within the first few hours following moderately long exposures.—*American Medicine*, December 2, 1905.

**Copper Salts in Actinomycosis and Blastomycosis.**—In this paper, which he calls a preliminary report, A. D. Bevan, Chicago (*Journal A. M. A.*, November 11), remarks that, while

iodid of potassium has a very definite and positive effect on circumscribed lesions of actinomycosis, a very large proportion of the cases of abdominal and lung infection are fatal, in spite of the treatment. He has been looking therefore for some other method of treatment, and the well-known action of copper salts on vegetable parasites suggested their employment. Of these the most powerful is the sulphate which the French investigators have shown can be taken in doses of from 2 to 8 grains a day for a long period without deleterious results. He has used it in several cases in doses of from one-quarter to one-half a grain, in some cases increasing it to one grain three times a day, also employing irrigation with a 1 per cent. solution. The results seemed so satisfactory that he has also used it in two cases of blastomycosis, the skin lesions of which are likewise benefited by iodid of potassium, especially in conjunction with the X-ray. A case of each of the two diseases thus treated with good results is reported. The treatment seems to him to be a logical one, and he thinks that collective further experimentation should be undertaken to determine the value of copper as a cure for these conditions. It is possible that, as in syphilis, a mixed treatment, using both copper and the iodids, would be most effective in some cases.

**Should the Youth of this Country be Instructed in a Knowledge of Sexual Physiology and Hygiene?**—Prince A. Morrow (New York City) says the general principle is laid down that the education of the public is the most valuable of all measures for the prevention of communicable diseases. Its importance is emphasized in the case of diseases the communication of which lies entirely within the control of the individual. The object of the proposed education is to give the youth of this country a clear comprehension of certain physiologic truths which have a direct bearing upon the regulation of their sexual lives and of the serious consequences in the shape of disease and death which follow a breach of hygienic laws. In other words, it is to teach them how to live according to the laws of a healthy nature. This instruction in the physiology and hygiene of the sex function should form an essential integral part of the education of youth. Dr. Morrow criticises our present educational system the policy of which is to launch the young into the world in complete ignorance of everything pertaining to the laws of life reproduction. In seeking this knowledge the youth is but obeying a law of his mental evolution. Since this knowledge cannot be had from legitimate sources—from parents and instructors—it is gained surreptitiously and usually from depraved sources—dissolute companions or erotic or quackish literature. To be salutary as a safeguard, therefore, this hygienic education should be given in youth, for it is during this period that the foundations of what may be termed the "sexual character" are laid and habits of mind and practices are formed which, in a great measure, determine the future sexual life of the individual.—*American Medicine*, January 13, 1906.



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## Original Articles

### IMMUNITY IN THEORY, EXPERIMENT AND PRACTICE.\*

BY LUDWIG HEKTOEN, M. D.,

Professor of Pathology in Rush Medical College, Chicago.

#### ANTIGENS AND ANTIBODIES

Toxins and other substances have the power when introduced into the susceptible animal body to induce the formation of specific antibodies. All substances with this property may be classed as antigens. Any cell that can bind antigens and produce receptors may produce antibodies also. This power is probably widely spread among the cells of the body. Antibodies may form *in loco* where antigens are deposited as shown by Römer, who found that treatment of the conjunctiva of one eye with abrin gave rise to antiabrin in that eye only, and by v. Dungen who found that specific precipitin was formed in the treated eye only and nowhere else.

Bacteriolysis, or the solution of bacteria by normal and immune serum, is a complex process. Late investigations have shown that there is no concordance between natural immunity and the bactericidal power of the serum as now understood. Thus human serum is strongly

typhocidal, yet as typhoid fever establishes itself there develops a typhoid bacillemia. On the other hand, dog serum is not harmful to anthrax bacilli and nevertheless the dog is naturally immune to anthrax. The serum of normal animals and of man contains several haemolytic and bacteriolytic bodies, and by immunization with animal and bacterial cells, as well as cellular disintegration products, the amount of these substances may be increased or entirely new lytic substances may be produced in a specific manner.

The attached or free cell constituents or receptors that give rise to lysins have been called lysogens. Conradi, Neisser and Shiga, Strong and others have demonstrated that autolysis of typhoid, dysentery and cholera bacteria killed by heat, sets free bacterial receptors—lysogens—which on injection in sterile filtrates, give rise to immune bodies, i. e., to active immunity. Wassermann, on good experimental basis, recommends for artificial immunization against typhoid fever and cholera, powder obtained by evaporation in vacuum of the fluid that results when suspensions of bacteria are killed

\*Abstract of an address before the Wayne County Medical Society, January 15, 1906.

by heat and allowed to digest themselves. Both normal and immune lytic serum causes lysis by virtue of two distinct interacting substances, one that as a rule is destroyed by heating at  $55^{\circ}$  C. for thirty minutes, the complement, and one that is more thermostable (Bordet). Serum that has lost its lytic power on account of destruction of the complement by heat or otherwise is said to be inactivated; it may be reactivated by the addition of fresh serum containing the suitable complement only. The thermostable body, commonly called immune body or amboceptor, is the one that is produced in a specific manner during immunization.

Amboceptors are fairly stable bodies; heating to  $60^{\circ}$  C. for 20 hours has no marked effect upon them, but heating to  $70^{\circ}$  C. for one hour commonly destroys them. They are non-dialyzable and may be kept for years. Not all bacteriolytic serums are thermolabile. Alice Hamilton has found that rabbits and goats immunized to virulent pseudodiphtheria bacilli contain specific bacteriolytic substances which are rendered inactive only by heating at  $88^{\circ}$  C. for one hour. Jessie Horton finds that the anthracidal action of normal white rat serum, ascribed by Behring, Pirenne and others to its alkalinity, is more likely due to a thermostable anthracidal substance that makes its appearance as the animals grow older; soon after birth the serum is inactivated by heating at  $56^{\circ}$  C. for 30 minutes. A serum may contain amboceptors for a certain cell but not any suitable complement, as in the case of dog blood, for instance, which contains an amboceptor readily taken up by anthrax bacilli; the complement necessary to complete the lysis may be found, however, in some other animal, e.g., the rabbit. The complements are

sensitive, ferment-like substances normally present in blood; and are not increased by immunization with foreign cells. Blood contains many kinds of complements, and not merely a single one, as usually claimed by French investigators, and the complements in different bloods may differ as to the affinities of their haptophore groups. This is illustrated by the presence in rabbit serum of a complement for the anthrax amboceptor in dog's blood, none of the complements of which fit the amboceptor.

The efforts to develop a curative serum therapy of the human infections caused by bacteria giving rise to bacteriolytic immunity are still in the experimental stage. So far treatment of established infections with immune bacteriolytic serum has not given the desired results in a positive and unequivocal manner. It is quite evident that a further insight is necessary into the nature of the so-called endotoxins as well as into the complex metabolic changes initiated by them as they are set free in the infected body. Of late, the view is gaining ground that the diseases of this class of which typhoid fever is perhaps of greatest direct interest to us, are due not solely to specific bacterial intoxication, but in larger degree than at first believed to poisonous substances derived from abnormal changes in the constituent elements of the host. On the other hand the knowledge of the mechanism of bacteriolytic immunity is proving of great assistance in devising harmless yet effective means of preventing certain diseases—cholera, typhoid, dysentery, pest,—by active immunization. For the purpose of human antibacterial inoculations, sterile material must be used and recent efforts have been concentrated upon securing the bacterial

constituents or antigens concerned in as pure form as possible, free from unnecessary admixtures with other more or less harmful substances. Thus filtrates of self-digested bacterial cultures killed by heat appear to constitute effective vaccines that are quickly absorbed without causing much local reaction. Dried, powdered products of autolysis of typhoid bacilli, killed by heat, are recommended by Wassermann for artificial immunization against typhoid fever in persons especially exposed to the disease. Wright's antityphoid inoculations of British soldiers in the Boer war were made with crude bacteria, killed by heat, and although the practical results are difficult to estimate, the outcome appears to have been fairly successful. The degree of active bacteriolytic immunity is measured by determining the specific bactericidal powers of the serum. For 4 or 5 days after inoculation there may be a distinct fall in the bacteriolytic powers and presumably in resistance to infection. This period which may prove fateful to the patient, is believed to correspond to the occupation and consequent overproduction of cellular receptors, while the liberation of amboceptors upon a large scale is not yet under way. Acquired bacteriolytic immunity, experimental and otherwise, may be conceived to depend upon the circumstance that destruction of the invading bacteria now is hastened to completion before chance is given for their multiplication to the extent that adequate doses of poison, however produced, are yet free. The relative immunity that appears to persist for some time, even after the excess of bacteriolytic substances have passed out of the blood, has been explained as dependent on an abnormal sensitiveness of the cells, which now react with greater

promptness and efficiency than before setting free abundant antibodies on slight stimulus.

#### OPSONINS AND PHAGOCYTOSIS

After accounting for immunity through the agency of antitoxins and other antibodies, there remain a number of infections in which phagocytosis probably plays the essential rôle in the destruction of the invading microbes, and the recent discovery by Wright and Douglas of the presence in normal blood of certain substances, called by them opsonins, which render various bacteria susceptible to phagocytosis, has stimulated anew the interest in this process. It has been shown conclusively that phagocytosis of many bacteria by the leucocytes of normal animals, including man, is wholly dependent on these special substances which become attached to the bacteria, and in some as yet unknown manner so change them that they are readily taken up by polymorphonuclear leucocytes. Leucocytes, freed from serum by washing, do not take up bacteria suspended in salt solution. Bacteria, treated with opsonic serum and then freed from serum by washing are taken up by washed leucocytes. Bacteria so treated may be designated as sensitized, but sensitized bacteria are not necessarily altered recognizably in form or function and many bacteria, e.g., staphylococci, streptococci, pneumococci, and anthrax bacilli multiply freely in serums that contain opsonin.

Normal human serum contains opsonin for staphylococci, streptococci, avirulent pneumococci, diphtheria bacilli, meningococci, typhoid bacilli, anthrax bacilli and tubercle bacilli, and probably many other bacteria. It has been found that the opsonin in the blood of one species



may sensitize bacteria for phagocytosis by the washed leucocytes of a different species. Most normal opsonins are destroyed or rendered inactive by heating at 54-60° C. for 30 minutes, some being more resistant than others. There is abundant evidence to show that immunization with suitable bacteria and red corpuscles may give rise to immune opsonins. Wright and Douglas noted a marked increase in the opsonic power of patients suffering with chronic staphylococcus infections, after injections of 0.75—1 c. c. of heated broth cultures of staphylococci. They also found the opsonic power with respect to tubercle bacilli greatly increased in response to inoculations of a tubercle vaccine. In the blood serum of rabbits immunized with goat blood, there is present in addition to the hemolysin, a substance that renders the red corpuscles of the goat and also of other animals susceptible to phagocytosis by the leucocytes of the guinea-pig, dog, and man. When blood corpuscles and leucocytes are mixed with the specific serum, heated to destroy the complement, and placed at 37° C. for one hour then the leucocytes become crowded with corpuscles, whereas in controls with normal serum or NaCl solution there is no phagocytosis. This substance is probably different from lysin and agglutinin because these may be present in serums without any effect upon phagocytosis. By means of absorption experiments, it is easy to show that the substance in question acts upon the corpuscles, which take it up, and not upon the leucocytes, resembling in this respect the substances (opsonins) with analogous actions upon bacteria. The increase of opsonin in the serum of immune animals is shown very well in some experiments forming the

basis of a table which I have taken from an as yet unpublished article by Miss Hamilton.

Now the demonstration that opsonins render various bacteria susceptible to phagocytosis does not prove fully that these substances are of any importance in infections. It must be shown that virulent streptococci and other organisms are destroyed within or by the phagocytes, that phagocytosis is essential for the destruction of certain bacteria by the blood. This was done so far as experiments in the test tube go, by Denys when he demonstrated that in mixtures of normal rabbit leucocytes and normal rabbit serum there was little or no destruction of virulent streptococci, whereas when immune serum was substituted, prompt phagocytosis with complete destruction of the streptococci took place. The serum of normal persons and of patients with streptococcus infections has no streptococcal effects but constitutes a good medium for streptococci. G. F. Ruediger has shown that normal defibrinated human blood has streptococcal effect, that blood from patients with acute infections and leucocytosis has much greater effect, and that the higher the leucocyte count the greater this effect. He shows, too, that the opsonin in the serum must be present in the mixtures in order that streptococci may be destroyed. It is extremely probable that the relative immunity of the dog to anthrax is due to phagocytosis. Virulent anthrax bacilli grow freely in normal dog serum and in suspensions of washed dog blood corpuscles. They are destroyed, however, in defibrinated dog's blood and the destruction is associated with marked phagocytosis. Destruction also takes place when normal serum is added to

washed corpuscles and when bacilli, sensitized in normal serum, then washed, are mixed with washed corpuscles or leucocytic exudate. The essential rôle of intraleucocytic destruction of the bacilli is shown in plate cultures made with decreasing quantities of blood, a fixed quantity of bacilli, the total quantity being kept at 1 c.c. in all cases by adding normal dog serum. The destruction decreases as the leucocytes decrease. The prompt and pronounced phagocytosis observed by various investigators of different bacteria in the peritoneal cavity in the presence of specific immune serum, indicates that opsonins play the same part *in vivo* as *in vitro*, and it may be concluded that in opsonins we have a new form of antibody that must be reckoned with especially in the explanation of immunity to and healing of those infections that are caused by bacteria such as streptococci, staphylococci, pneumococci, etc., the destruction of which is not at all or at least not readily accomplished by free lysins.

I wish to emphasize the practical importance of these recent investigations by a brief reference to the treatment of certain infections by the use of vaccines prepared from the corresponding bacteria and to antistreptococcus serum. Reference was just made to the fact that in chronic staphylococcus infections (furunculosis, sycosis, acne) Wright found the phagocytic power of the blood much less than in healthy persons. In order to increase the phagocytic power Wright injects the patients subcutaneously with 0.75—1 c. c. of a staphylococcus vaccine, made by heating at 65° C. for 20 minutes three weeks old broth cultures of staphylococci isolated from the boils. The phagocytic power now increases

markedly and this increase depends not upon direct stimulation or change of the leucocytes, but upon increase in the opsonin as shown by the fact that in this serum washed leucocytes from both normal and immunized persons take up a larger number of staphylococci than in normal serum.

Without going into details the practical results described by Wright and Bulloch certainly appear very promising. The treatment of intractable cases of localized tuberculosis by means of minute doses of Koch's new tuberculin, which is an emulsion of ground tubercle bacilli, has given very favorable results in the hands of Wright and others and at least one of the reactions following tuberculin injections has been found to be an increase in the opsonic power of the serum with respect to tubercle bacilli. This interesting and at first paradoxical form of therapeutic inoculation of vaccines in persons infected with the corresponding bacteria may be conceived to owe its beneficial effect to the more sudden production in larger quantities than under the existing conditions of the substances necessary to destroy the infective agents. But this phase of the problem merits much further investigation. It is most interesting to observe, however, that Behring's widely-heralded but as yet only tentative remedy for tuberculosis is based on this same general principle, the method consisting of the use for protective and curative purposes of certain otherwise harmless constituents of the tubercle bacillus. We can readily see that in this instance Behring appears to be following paths that are already broken. In the terms of modern immunology "the curative element" of the tubercle bacillus which

Behring believes he has succeeded in isolating would be certain antigens, which under suitable conditions in the living body give rise to formation of specific antibodies, among which we are permitted to infer from Behring's rather ambiguous statements that those concerned in phagocytosis are considered by him to be of special importance.

The only serum at present used for curative purposes that is of special interest from the view of phagocytosis is antistreptococcus serum. Much of what may be said as to the nature and mode of action of antistreptococcus serum in animals is probably also in the main applicable to antipneumococcus serums. The plasticity of streptococci has stood as a barrier in the way of securing direct experimental evidence as to whether or not antistreptococcus serums have any specific effects on the streptococci in human infections. The serums obtained by immunization with streptococci derived directly from human sources have little or no effect upon animals infected with virulent streptococci. Consequently, we have at present no method of obtaining knowledge of the presence or absence of specific antibodies in these serums. There is no reason to believe that the agglutinative properties of antistreptococcus serum give any indication as to its antistreptococcal powers. We are consequently without the necessary means to test the properties of antistreptococcus serums upon the streptococci engaged in human infections. This leaves us without adequate control of the strength and composition of the serums offered for use. In the serum of immunized rabbits and horses, normal leucocytes were found to possess marked phagocytic power on virulent streptococci, a power which

Denys and Leclef as well as others ascribe to the action of the serum upon the leucocytes, but which I maintain we now know is due to the action of an immune opsonin upon the streptococci, thereby changing them in such a way that they are taken up by the cells. Consequently immunization with animal-virulent streptococci may give rise to more or less specific opsonins that render virulent cocci subject to phagocytosis and presumably also to intraphagocytic destruction. It is possible that the study of the opsonic action of therapeutic antistreptococcus serum, and of phagocytosis of streptococci in vitro under its influence, may give us some indications in regard to the question whether the serum contains specific substances for human streptococci. It is possible that part of the beneficial clinical results attributed to antistreptococcus serum may be due to the production of an increased leucocytosis.

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**The Uses and the Abuses of the Free Dispensary.**—R. Oliver Kevin (Philadelphia) divides those who patronize free dispensaries into four principal classes: (1) Those able but not willing to pay; (2) those who, not knowing a specialist, want to find one without being compelled to pay a specialist's fee; (3) poor, suffering unfortunates, who either by drink, misfortune, ignorance, or poverty, are forced to avail themselves of a dispensary's charity; and (4) hypochondriacs, who find, or try to find, relief from their fancied ailments in the different departments of a hospital dispensary. He believes that one reason for the abuse of dispensaries lies in the fact that it is to the interest of those connected with the institution to have, if possible, a large service, also that while dispensaries continue to afford practice, experience, and reputation to young doctors, and old ones, too, for that matter, and "something for nothing" to the general public, the number of patients will not diminish and physicians will always be applicants for vacancies.—(*American Medicine*, February 24, 1906.)



## VAGINAL AND UTERINE PROLAPSE\*

J. H. CARSTENS,  
Detroit.

In the unmarried and nullipara, prolapse is very rare, unless due to pressure from above or hypertrophy of the cervix. In my experience, the latter condition is not often met with, although I have read a good deal about amputation of the cervix, which is the proper operation in these rare cases. When there are tumors of either the uterus or ovaries, they will require special operation, according to the character of the growth. The fortunately rare conditions of injury will require a plastic operation according to the character and severity of the lacerations. With these few remarks, we can dismiss this part of the question.

Prolapse is consequently only found after child-bearing, and here we have various conditions producing it. At the head of the list, we can put lacerations of various kinds. The lacerations are of various types of severity, are in different directions, and are more or less extensive. Each is a law unto itself and the operation must vary with the condition found. This refers especially to the laceration of the perineum. In many of these cases, we find accompanying it, a relaxed condition of the vagina; in fact, with some cases, we find a relaxed condition of the vagina and perineum without any tear, that is a subinvolution of the vagina; in others, no tear in the mucous membrane or the skin, but a tear of the perineal fascia, and some of the muscles are retracted allowing the pelvic floor to give way, resulting in descent of the uterus, bladder and rectum. Where this condi-

tion is found as the result of subinvolution of both the uterus and the vagina, by proper constitutional and local astringent treatment, the symptoms will subside, and tone will be restored to the pelvic floor without any operative procedure.

In some of the cases, the vagina and perineum are virtually intact, but the patient, in lifting and straining, or getting up too soon, causes the uterus to simply descend. In this class of cases a simple pessary will relieve the patient, as the uterus has its proper circulation restored by being kept in correct position, and by hygienic treatment the patient, in a couple of months, will be relieved without an operation. This, however, can only be brought about by having proper treatment instituted as soon as this condition is noticed, that is soon after confinement or miscarriage.

We then have a large class of cases which we only see a long time after the condition is established. The average cases, with a rectocele and cystocele and descent of the uterus, the latter going probably just at the vaginal outlet, are found in many women who pay no attention to their condition until it becomes very distressing and causes a number of symptoms. Hence, most of the cases we see are old. Some of the simple methods of treatment, which could be carried out by the general practitioner, are of no avail, but some operation, sometimes quite complicated, must be resorted to. If the uterus is small, repair of the laceration of the perineum (sometimes with an anterior colporrhaphy) will restore the woman to a nearly normal condition. But here again

\*Read at the Petoskey meeting of the Michigan State Medical Society, June, 1905.

it depends a great deal upon the age. If the woman is in the childbearing age and liable to become pregnant again, the narrowing of the vagina and removal of the mucous membrane, I consider to be bad practice, as we are bound to have a fresh tear through the weak scar tissue. In such cases, we should always make a flap-splitting operation and keep the mucous membrane and submucous elastic tissue intact so that it may relax in a future labor without tearing. In some of these cases, the uterus is retroverted and if it is small, a Mackinrodt or Dührssen operation, done at the same time, will often give much relief.

If, however, the uterus is large, a simple plastic operation on the pelvic floor will be of no avail. Some abdominal operation must be performed. Sometimes an Alexander operation is enough. Where there are ovarian and tubal diseases with adhesions, they require an abdominal operation after a plastic operation has been performed, and this can be done at the same time. And then it depends on circumstances what should be done. Sometimes an ovary or tube will have to be removed, sometimes adhesions need only be liberated or the shortening of the round ligament be made or a Gilliam operation or a ventral fixation. I simply mention these points; it is out of the province of this paper to go into operative detail.

But I want to emphasize the fact right here that a plastic operation is insufficient in many cases to restore parts to even a nearly normal condition, and I have seen many cases not cured that have been promised relief and freedom from symptoms, by simply sewing up the tear in the cervix and restoring the ruptured perineum. The large uterus or the diseased condition within the pelvis was overlooked.

These operations must be varied according to the case; no absolute rule can be laid down. In fact, often after laying out a plan of action in our own mind and after opening the abdomen, we find different and unexpected conditions and must change the whole operative procedure. So much also depends on the woman, her age, her future prospects of pregnancy, her great desire to have children in the future, that in a short paper like this I would not attempt to cover the whole ground.

There is, however, another class to which I want to call your attention, that is the prolapse in old women, where all these different plastic operations are of no avail and where the uterine fixation or suspension offers the only hope of relief, if we except hysterectomy. When a woman is past the childbearing period, it has also seemed to me that the opening of the abdomen and fixation of the uterus, in whatever way you do it, is really a more dangerous operation than the complete removal of the uterus by vagina. In rare cases, a pessary, of some kind, will keep the parts in place and make the woman fairly comfortable, but the resulting erosion, discharge and discomfort of wearing an instrument, no matter of what kind, is so great that as a rule I recommend vaginal hysterectomy. This can be performed in a very few minutes with very little danger and by sewing the broad ligament together and closing the pelvic floor, the woman is relieved and enabled to do even hard work.

In conclusion, I will say:

1. Prolapse is rare in nulliparæ.
2. If due to subinvolution and seen early, it can be often relieved by supports, with local and constitutional treatment.
3. If due to lacerations, these can be repaired by plastic operations, but the

mucous membrane must be preserved in those of childbearing age.

4. The latter operation must be amplified by abdominal section, if there is pelvic trouble.

5. In very rare cases, an Alexander operation is indicated, but when the abdomen must be opened on account of

other conditions, it is best to make one of the intra-abdominal shortenings of the round ligaments or some kind of ventral suspension.

6. In the old, those past the menopause, a plastic operation will be of no avail. A vaginal hysterectomy will be less dangerous and give better relief than an abdominal suspension.

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### EPILEPSY.\*

WM. A. POLGLASE.

Lapeere.

In ancient times, epilepsy, like insanity, was regarded with superstitious awe, and the belief was generally held that the subject of the disease was possessed by a demon from which he vainly strove to free himself, or was suffering punishment inflicted by a deity whose anger he had incurred. Hippocrates, however, did not accept this theory, and boldly asserted that the disease originated from natural causes and that men regarded it as of divine origin purely from ignorance. That the disease was not only well known but that there was also a fine conception of an attack, even twenty centuries ago, are proven by some verses of Lucretius:

"Oft, too, some wretch, before our startled sight,  
Struck as with lightning, by some keen disease,  
Drops sudden:—By the dread attack o'erpowered,  
He foams, he groans, he trembles, and he faints;  
Now rigid, now convulsed, his labouring lungs  
Heave quick, and quivers each exhausted limb.  
Spread through the frame, so deep the dire disease  
Perturbs his spirit; as the briny main

Foams through each wave beneath the tempest's  
pest's ire.  
He groans, since every member smarts with  
pain,  
And from his inmost breast, with wontless  
toil,  
Confused and harsh, articulation springs.  
He raves, since soul and spirit are alike  
Disturbed throughout, and severed each from  
each,  
As urged above distracted by the bane.  
But when, at length, the morbid cause declines,  
And the fermenting humours from the heart  
Flow back—with staggering foot the man first  
treads,  
Led gradually on to intellect and strength."

This conforms very nicely to our own conception of a seizure. From the dawn of history, the disease has been enveloped in mystery which is not even now dispelled, and into which it may be said the light of science has not practically penetrated; only during the past twenty years, has much advance been made in scientific knowledge of the subject, and only within a period of between thirty or forty years, has any considerable effort been made to ameliorate the condition of epileptics. So high an authority as Dr. Ira VanGieson says: "All the facts which the pathological anatomist and physiological chemist have gained in the

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\*Read before the Lapeer County Med. Society, January 10, 1906.



study of this dire malady give no explanation of the *process* that gives rise to the epileptic phenomena." After discussing various theories as to the cause of epilepsy, Dr. Wildermuth, of Stuttgart, writes: "We should still be in ignorance of the real nature of epilepsy even if we knew the cerebral origin of the separate attacks. Anatomic investigation has as yet shown us no lesion which can be deemed characteristic for epilepsy."

The following definition is given by Landon Carter Gray: "Epilepsy is derived from the Greek word, *epilambano*, meaning the 'falling sickness,' " as a loss of equilibrium was the first phenomenon that attracted attention. But since that time the term has been applied to a far wider range of phenomena, which are characterized by a sudden loss of consciousness, with convulsions affecting muscles in varying degree, or loss of consciousness without muscular implication, or muscular convulsions without loss of consciousness; and it is also given to a condition of alternating consciousness, as well as to certain mental phenomena which are supposed by some authors to be equivalents of the convulsive or comatose symptoms.

Dr. Frederick Peterson calls epilepsy a functional disease of the brain, in which the chief feature is a sudden loss of consciousness. The loss of consciousness may be complete or incomplete. Generally it is accompanied by spasms.

We have two general types of attacks expressive of the epileptic condition—*grand mal* and *petit mal*, one representing the more severe and the other the lighter attacks. They may come on frequently each day or once in two or three days, or several times a month, or in some instances years apart.

We have come to know that epilepsy does not always manifest itself in the severe or typical form. There is an infinite variety of expression, varying in intensity from the merest flash of drooping consciousness to the most terrible and violent throes of muscular activity, so severe that blood vessels rupture in the superficial or deep lying structures or that dislocation of the joints or fracture of the bones occur, or they may be of so slight a nature that a patient may have a mild type of epilepsy for years without any one having knowledge of its existence.

Other types of the disorder have been variously called cursive, laryngeal, vertigo, alcoholic, hystero-epilepsy, cortical epilepsy, or Jacksonian (after J. Hughlings Jackson), and numerous others that are grouped under the head of reflex epilepsy, a term that is apt to be misleading and should more properly be captioned as eclampsia, epileptiform or epileptoid seizure.

One form of epilepsy which should especially engage our attention is the so-called mental type, known as psychic epilepsy, including that of double consciousness and described by Peterson as follows: "There is in this no loss of consciousness, not even a subconscious state; no cry, no fall, no spasm, however light, of the muscles, but simply a sudden and ordinarily, a transitory change in the mental condition of the patient. This is known as pure psychic epilepsy. It is often the case that mental changes also precede or follow ordinary epileptic attacks. These mental changes are incident to the seizures, but there are psychic outbursts which take the place of the attacks, and it is to these I now allude.

We thus see the difficulty of offering

an exact definition of epilepsy. The best definition would be that epilepsy is a disease of the nervous system characterized either by frequently recurring convulsive attacks with loss of consciousness, or by partial manifestations of these symptoms, or by psychopathic substitutes, concomitants, or results.

There is no question in my mind but that there is still open a large field for investigation, by experts in morbid psychology, relating to the cause of deranged consciousness and peculiar psychic changes in epilepsy, for the ordinary symptoms or expression of the malady are pretty well defined.

There are many factors that bear relationship to the etiology of epilepsy, or in other words that predispose the individual to the action of that specific undefinable agent which is manifest as the result, when the nervous mechanism governing the normal process of the body and often of the mind is deranged. Prominently among the numerous disorders may be mentioned organic, brain, spinal or peripheral lesions, traumata, lesions or impairment of function of non-nervous organs, malnutrition, hysteria, syphilis, meningitis, (cerebro-spinal, tubercular, suppurative) tumors, abscess, ear disease, sclerosis of the brain and cord, cerebral palsies of childhood, due to proencephalus, hemorrhage from the cerebral arteries, embolism of the cerebral arteries or veins.

The influence of heredity, as a cause of epilepsy, is most striking and the estimate that it is a prime factor in more than one-third of the cases is extremely conservative. It has been said that "epilepsy is one of the equivalents in polymorphine heredity and so the descendants of pronounced neurotics will generally

manifest in one of many forms of epilepsy, chorea, neurasthenia, hysteria, somnambulism, migraine, feeble-mindedness, idiocy, insanity, inebriety, criminal tendencies or simple eccentricity. These so called hereditary equivalents may appear in a neurotic family from generation to generation. They are the interchangeable manifestations of an unstable nervous system.

Here is shown the importance of making careful inquiry into the family history of any case of epilepsy.

The abuse of alcohol is another important cause, producing in the inebriate alcoholic epilepsy and a more potent factor in the causation through alcoholic hereditary degeneration. "Thus alcoholism in parents is prone to induce epilepsy and other evidence of nervous instability in the children."

I believe that injury to the head at birth is not an infrequent cause of epilepsy, as well as infectious diseases acting on the parents or on the patients themselves; frights or other emotional shocks either to the pregnant mother or the child, and a variety of obscure toxic conditions.

"The reputed condition, known as reflex epilepsy, i.e., convulsions brought about by irritation of peripheral nerves, such as disorders affecting the visceral nerves in the pelvis, the nerves of the gastro-intestinal tract, the nerves of the nose and of the ear, the nerves associated with the eye, etc., is undoubtedly the rarest form of epilepsy known. I can frankly say, among several thousand cases observed by me, I have never yet met with a case of epilepsy due to a reflex factor, though I have always made it a point to seek such a cause.

Females are rather more subject to epilepsy than males and by far the largest

proportion of cases occurs under nineteen years of age, most frequently from 10 to 29 years. After the latter age there is a rapid decrease in frequency until the cases become very infrequent after 50 and seldom occur after 60 years of age. The following table is taken from a report of 125 cases in the Ohio Hospital.

Infancy .....	339 cases
5 to 10 yrs. ....	194
10 to 15 yrs. ....	296
15 to 20 yrs. ....	173
20 to 30 yrs. ....	159
30 to 40 yrs. ....	61
40 to 50 yrs. ....	20
Over 50 yrs. ....	14
Unknown .....	39
18 per cent. had relatives epileptic.	
8 per cent. had relatives insane.	

An estimate of the number of epileptics in the community shows that there are two to every one thousand of the population; of these, 68 per cent. are either imbeciles or idiots and only two per cent. are normal, while the remaining difference is made up of the insane, cranks, and disagreeable persons generally.

Epilepsy is a peculiar disease of whose pathology we know little or nothing, and yet it would not be presumptuous to say that we have been able to limit its position in the organism to the cortex of the brain, "It is not an organic disease but what we call a functional disorder, a neurosis, and as yet neither the naked eye nor the microscope has been able to discover any changes in the brain cells or in the fibers that can be considered constantly and distinctively associated with epilepsy." Of the many theories of the specific cause of epilepsy, promulgated in the past and tacitly accepted here and there to-day, I desire to mention one that has but recently appeared, with such high scientific endorsement that it has deeply interested me, inasmuch as a recent case in my ex-

perience would tend to confirm the theory. Quoting from an article in the December number of the *Journal of Nervous and Mental Diseases*. "Turning from the empirical results of dietetic investigations to the recent chemical-pathological studies of epilepsy, there is good ground for the assumption that the various manifestations of this disease are probably dependent upon a disorder of nitrogenous metabolism, and upon nothing else. This disorder is supposed to consist in the formation of a poisonous substance, which is either not formed at all in the normal state or exists only in harmless quantities, and which in epilepsy accumulates in the body more or less rapidly, causes vertigo, convulsions and psychic equivalents, and during the seizures is converted into urea—the final product of proteid metabolism. In other words, in epileptics at a certain stage in the process of conversion of proteid material into urea, there is a hitch, and abnormal, often violent, activity of the nervous and muscular tissues becomes necessary for the completion of this process of conversion."

"That a substance capable of producing convulsions and other phenomena of epilepsy actually exists in the blood of patients in the *status epilepticus* has been proved by the researches of Krainsky, who, by injecting blood obtained from patients in that condition into guinea pigs, produced convulsions and paraplegia. The same observer also found in the blood of patients in *status epilepticus*, large quantities of ammonium carbamate; and he has shown that by injecting this substance into rabbits, epileptic seizures can be produced."

"Ammonium carbamate is said to be present in the blood, normally, in very small quantities and is supposed to be a



precursor of urea. Its conversion into urea occurs chiefly in the liver, and Krainsky finds further corroboration of his theory, according to which the phenomena of epilepsy are due to the periodical accumulation of ammonium carbamate in the circulation, in the experiments of Hahn, Massen, Nencki, and Pawlow. These observers have shown that when in animals an Eck's fistula is established (an artificial communication between the portal vein and the inferior vena cava), the portal circulation is thrown out of action and the ammonium salts, formed in the course of proteid catabolism, being no longer completely converted into urea, accumulate in the circulation, presumably in the form of the carbamate, and give rise to convulsions, ataxia, somnolence and coma before the animal dies."

The prognosis of epilepsy depends upon the frequency and severity of the attacks. In about 10 per cent of the cases, the frequency and severity are so great that the patients become ultimately insane. In a pronounced form of the disease, treatment either by medical or surgical means is disappointing. The disease, however, is not so hopeless as many physicians have hitherto believed, for statistics show that, under the modern care and treatment of the colony life, from 6 per cent to 10 per cent, under the most favorable conditions of age and treatment, recover and from 60 per cent. to 70 per cent., if taken in time, are made to live a comparatively comfortable life and not an inconsiderable number become quite or nearly self supporting, or made orderly and useful members of the community. As the largest number are children or young persons, too much stress cannot be made to urge an early vigorous measure for ameliora-

tion. The average duration of life, after the manifestation of the disease, is 11 years.

The treatment of epilepsy should be viewed from two standpoints, that of prophylaxis and that of amelioration of the condition of the victims. The betterment and uplifting of the human race by the recognition and appreciation of the laws of heredity, the prevention of marriage of the denegate and physically unfit, the abolishment of the common enemy, alcohol, and such social evils as tend to the production of neuroses are some of the conditions to appreciate and understand in their baneful effects in the production of morbid heredity. And this must necessarily be a matter of general education of the people.

The amelioration of the condition of the epileptic is one that would require more time for elaboration than I could be allowed in a paper that has possibly become already too tedious and lengthy. I simply desire to say that the colony plan, with its methods, offers the best and most adaptable methods for his care and treatment. Another means lies in securing the endowment of scientific laboratories where the best pathologists, psychologists and chemists may join together in studying the causes and methods of treatment of the disease. Every special institution for epileptics should generously maintain a pathological institute, and no money could be more advantageously appropriated or given, whether by state or private philanthropy, than money devoted to this end.

In conclusion, I wish to add that epilepsy is a condition or factor which may be engrafted upon any or all types of persons, but more especially manifests itself in degenerates of all degrees and classes, intensifying and distorting during their

seizures or status state, an otherwise tractable and peaceable disposition. Some are incapacitated nearly all of the time, while others have varying periods when they are well, strong, and healthy looking, and able to work and study as are other people. But no matter how they may be endowed mentally, or with what grace of person, their lives are under a deep shadow. Every avenue to progress and development is closed to them. If, as in the case of one-half of all who have epilepsy, the attacks begin in early childhood, they are not admitted to the public schools and unless they have other means of procuring an education, they must grow up in total ignorance. They are denied employment because nobody will have them when it is known that they have "fits." If they attend church or any place of pub-

lic amusement, they cause confusion and alarm. They are a burden to their friends and associates, and to the community in which they live, and have been the *bête noir* of every public or private institution in which they have been placed. Many of them are not only quiet, but even attractive in many of their ways, but sooner or later they are bound to become deeply demented, or slowly enter a state of apathy and mental hebetude and idiotic state, frequently dying in sharp attacks of the malady, or receiving injuries, as they are in constant danger of accident from falling.

These unfortunates are debarred from all the privileges of society, and being left to themselves and leading lives of idleness, often with no one to direct them, it is not surprising that many fall into evil ways, become victims of the irresponsible or have their lives steeped in crime.

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### THE SPIROCHAETE PALLIDA\*

E. H. HAYWARD, M. D.

Bacteriologist to City of Detroit,  
Pathologist to St. Mary's Hospital.  
Detroit.

Since the advent of bacteriology, more than twenty different organisms have been credited with being the etiologic factor of syphilis, this rôle having been filled by bacteria, yeasts and protozoa. On this account, we should carefully consider any new discovery claiming this significance. The latest aspirant for this position is the spirochaete pallida, and none of its predecessors has so nearly fulfilled the requirements as this organism.

The spirochaetes, as a group, have never been successfully cultivated artifi-

cially, and in this group we place the spirillum of relapsing fever and the spirochaetes of chickens and geese; therefore, we must rely on their staining and morphologic characteristics to identify them.

In May, 1905, Schaudinn and Hoffmann reported finding a spirillum in the secretions of a number of cases of syphilis and this organism they called the spirochaete pallida. They demonstrated it in the smears from primary lesions, papules, enlarged glands, and by aspiration from the spleen. The characteristic shape and winding of the spirillum served as the point of differentiation between the pallida and others of the same species;

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they also demonstrated it in the experimental syphilis of monkeys.

Metchnikoff, Roux and a number of other observers soon verified the findings and the former workers proved conclusively that syphilis can be transmitted to anthropoid apes, gorillas, orangoutangs, and chimpanzees, obtaining positive results in all their inoculations. The inoculations were made on the genitals and eyelids, the stage of incubation being from 22 to 37 days. After ulceration of the primary lesion, enlargement of the lymph glands followed, the secondary manifestations appearing one month later and resembling those found on the human subject. From the mucous patches of the mouth, other monkeys were successfully inoculated. These experimental lesions are identical with the syphilitic manifestations in the human.

The spirochaete pallida, as its name implies, is a spirillum, 4 to 14 microns in length and one-quarter of a micron in diameter, having from 4 to 14 closely wound convolutions; it stains with difficulty and then only slightly, hence its name—pallida. Even in the best stained specimens, it is found with difficulty and it is necessary to use high power lenses. In most preparations, there are but few of the organisms found on a cover slip. An apochromatic, 2 m. m., oil immersion objective and a number 8 compensating eye piece are best adapted for observing this body, as with a lower magnification, only the very long spirals can be seen and the coils are made out with difficulty.

Schaudinn's observation of the organism in the living state, in the hanging drop, showed it to have a rotation on its long axis which gives it a backward or forward movement as well as bending. The same author has succeeded in dem-

onstrating flagella which are sometimes confined to one end or may be found on both. Physiologic saline does not affect their motion, which may be retained for six hours; glycerin, however, arrests it in from 5 to 10 minutes. In the living condition, the spirochaete pallida is highly refractive and retains its spiral form even in the fixed condition, whilst other spirilli merely appear undulated; the ends of the spirochaete pallida are pointed.

Spirilli are found in many ulcerative processes and are to be differentiated from the spirochaete pallida. The one most commonly found is the spirochaete refringens and differs from the pallida in that its body is thicker, its convolutions are not so closely wound nor are there so many, it is not flagellated and its ends are rounded, while its motion is more active than that of the spirochaete pallida. A valuable means of differentiation is the readiness with which the refringens stains, in marked contrast to the poor staining qualities of the pallida. Having made the smears, they are to be fixed; the method of accomplishing this varies with the different researchers. Schaudinn's original method was to employ osmic acid vapor, allowing it to act on the fresh smears; a perfectly satisfactory method, however, is to fix in absolute alcohol 15 to 20 minutes or in pure methyl alcohol 2 to 3 minutes. Formic aldehyde vapor may be used.

Many methods of staining have been tried and those which have been successful are gentian violet, carbofuchsin. Rominowski and Giemsa's method. In employing the gentian violet method, 10 gm. of gentian violet are heated with 100 c. c. of water for two hours; the solution is then allowed to cool and is filtered; smears are fixed in alcohol; stained for 15



minutes, washed in water and mounted or the stain may be used hot for 20 to 30 seconds. I have not found this stain to be satisfactory. Wrightman advises mordanting with 2 per cent. solution of phosphotungstic acid, and then staining with carbofuchsin; then the spirochaete pallida are thicker and easier to see but it is impossible to differentiate them by this method. Giemsa's stain is the one which has now supplanted all others and which has universally given good results. The formula for this stain is:

Azur 2 Eosin .....	3.0
Azur 2 .....	.8
Glycerin C. P. (Merck).....	250.0
Methyl alcohol (Kahlbaum).....	250.0

The technic consists in fixing in ethyl or methyl alcohol, drying the cover glass on filter paper and staining in a mixture of 15 drops of the stain in 10 c. c. of water, at a temperature of 30 to 40 degrees C., for from one to two hours, the preparation is then washed in a strong stream of tap water, dried and mounted. By this method, the spirochaete pallida is stained a pinkish color, while other spirochaetes are stained blue.

Some researchers have succeeded in demonstrating this organism in the blood of patients suffering from syphilis. At least one c. c. of blood should be taken and diluted to 10 c. c. with 1/3 per cent. acetic acid and the solution centrifugalized under high speed; smears are then made from the sediment, which are fixed and stained by Giemsa's method. The easiest method for obtaining the blood is to raise a superficial vein, preferably at the bend of the elbow, and with a hypodermic syringe withdraw the necessary amount of blood; this method is painless and does not alarm the patient. Blood smears may also be made and examined

directly from the punctured macules of the secondary stage.

In hereditary syphilis of children, the spirochaete has been found, in numbers, in the blood; *post mortem* they have been found in the liver, spleen, kidneys and different organs of cases of congenital syphilis.

Most researchers report that they are constantly to be found in all cases of primary lesions and all the varied secondary manifestations, such as condylomata, macular and papular eruptions, mucous patches, enlarged glands, etc., and it is remarkable that all have failed to demonstrate these bodies in tertiary lesions. Schaudinn believes that there is a resting or involution stage of this organism which may again become active, and in this manner he attempts to explain the tertiary exacerbations.

Soon after Schaudinn's announcement, I attempted to find these bodies, but owing to the extreme difficulty of procuring desirable material, especially cases which had not been treated, my results at first were very unsatisfactory. I first found them in the secondary lesion of the mouth and later was able to demonstrate them in primary sores. The spirochaete refringens, at the onset, caused some confusion until the pallida was observed, after which the differentiation was distinctive. Experience has taught me that the lesion should be scraped with a sharp spoon, so as to obtain the material from the deeper tissues, and the smears should be fixed soon after making and examined shortly after staining. Although the stains advocated by different authors have all been tried, positive results were obtained only by the Giemsa stain, and it has been found desirable to stain at least from 10 to 12 hours. In spite of the fact that other au-

thors have demonstrated numbers of this organism in a field, I could find but three or four on a cover slip.

I have examined in all 14 cases of undoubted syphilis and two cases of carcinoma. Of these 14 cases, two were tertiary and in neither of them were the spirochaetes found. In the remaining 12, which were either primary or secondary, the spirochaete pallida were found in 10 cases, in the two cases of carcinoma, the pallida was not found, although other spirilli were present. I had access to material from these cases but once and the failure of demonstrating them may be due to undesirable material or to faulty technic. Following is a brief summary of the cases examined:

Case 1. A prostitute, aged 25 years, had a primary lesion of the labia in May. At present she has a large ulcer, the size of a half dollar, on the inner side of the thigh, also a marked reddening of the throat. The ulcer has been treated for some time. It was scraped with a sharp spoon and smears made from the material so obtained. On examining these smears, no spirochaete pallida could be found.

Case 2. A young man, aged 27 years, with a history of syphilis of five or six years' duration; at present, he has an ulceration of the nasal septum, evidently a tertiary lesion. Smears made from curettings from this ulcer, failed to show the presence of the spirochaete pallida.

Case 3. A young man, aged 23 years, giving a history of a primary sore of the penis four months ago. He now has mucous patches on the pharynx and tonsils, the lesions having been treated vigorously with local applications. Scrapings from the mucous patches failed to show the spirochaete pallida.

Case 4. A young man, aged 24 years,

giving a history of a primary lesion, first noticed July 1st. At present, he shows an untreated ulcer of the hard palate. Curettings made from this ulcer showed the spirochaete pallida.

Case 5. A young man, aged 27 years, with a history of a sore of the penis 3 months ago. At present, he shows plaques on the tongue and mucous patches on the cheeks and tonsil. Scrapings from the tongue and cheeks both show the spirochaete pallida.

Case 6. A prostitute, aged 30 years, with a history of a primary sore of the vulva 8 months ago. At present, the vulva is covered with broad condylomata. These were removed and smears made from the epithelial surface and also from the cut surface. Both preparations showed the spirochaete pallida and refringens.

Case 7. A young man, aged about 24 years, with a hard sore on the penis. Smears were made from the secretions of the sore and a few spirochaete pallida were found, also a number of other spirilla which stained densely.

Case 8. A man, aged 38 years, with a history of hard sore of the penis 5 months ago. At this time he has a number of moist papules around the anus. Smears made from scrapings from these lesions showed the spirochaete pallida.

Case 9. A prostitute, aged 32, with a history of a primary lesion 9 years ago. At present she has a large, indolent ulcer of the thigh. Smears made from scrapings of this ulcer failed to show the spirochaete pallida but a number of spirochaete refringens were found.

Case 10. A young man with a hard sore on the penis and a history of exposure. Smears were made from the secretions of the sore but no spirochaete pallida could be demonstrated.

Case 11. A young man, aged 20 years, with a hard, indurated sore on the penis and a history of exposure about two weeks before. The sore had been dressed once with calomel. After washing off the sore, it was scraped and smears were made, which on examination showed the spirochaete pallida.

Case 12. A man, aged 60 years, with a sore on the tongue and enlargement of the sublingual glands, diagnosed as either syphilis or carcinoma. Smears from the sore showed the spirochaete pallida and after the man had been placed on specific treatment for about three weeks, the swelling of the glands subsided and the sore is now nearly healed.

Case 13. A prostitute, aged 27 years, who three months ago had a chancre of the cervix; at present, she shows plaques on the tongue, mucous patches on the cheeks and tonsils, and papular syphilides all over the legs, arms and breasts. Smears made from scrapings of the tongue and tonsil show the spirochaete. Blood smears made from an incised papule failed to show this organism.

Case 14. A prostitute, with a hard sore of the cervix. Scrapings were taken from the lesion and smears made, which showed the spirochaete pallida.

Hoffmann, in an article in the *Deutsche medicinische Wochenschrift* for October, 26, 1905, summarizes the work done up to date as follows:

(1) The spirochaete pallida is found with great regularity in all cases of recent syphilis.

(2) In uncomplicated cases of acquired syphilis, it is found in the primary lesion, genital papules, lymph glands, secondary exanthemata, and in some cases in the blood, without any evidence of other organisms.

(3) It has been demonstrated, by a number of authors, in the internal organs, in the specific exanthemata and occasionally in the blood of congenitally syphilitic children.

(4) It has failed to be demonstrated in otherwise diseased and normal human tissues.

(5) In the experimental syphilis of apes, it has been found by Metchnikoff, Kraus, Schaudinn and Zabolotny and constantly demonstrated, not only by inoculation with human virus but also from ape to ape, while Kraus controlling his experiments, failed to find it in healthy apes.

In conclusion, I wish to refer to the excellent paper lately published in the *American Journal of the Medical Sciences* for January, 1906, by Dr. Randal Rosenberg, of Philadelphia, who reports the findings in 34 cases, and also to thank Dr. A. H. Gorenflo for the invaluable assistance he has given me in obtaining material and in confirming my findings. My thanks are also due Drs. A. P. Biddle and R. E. Mercer for material from their clinics.

#### PNEUMONIA BRIEFS.

Give the pneumonia patient plenty of fresh air, but no draughts.

For the dry tongue in pneumonia, paint it two or three times a day with pure glycerin.

When rusty sputum is present, the diagnosis of pneumonia may be made in safety, even if but slight attention is given other phenomena.

In pneumonia, the highest pulse rates are found in childhood, and the younger the child, the more frequent the pulse at the same temperature.

If women are taken ill with pneumonia during the time in which their menstruation should occur, very high temperatures are usually noted.—v. Jurgensen.



## PRESENT METHODS IN THE TREATMENT OF PULMONARY TUBERCULOSIS \*

F. A. JOHNSON,  
Greenville.

In introducing this subject, I think it is proper to say something concerning prophylaxis. The tubercle bacillus is practically indestructible in the body; hence, the absolute protection of the human race depends upon prophylaxis. The fact that in the vast majority of cases, tuberculosis is disseminated by dried sputum and received into the body through the mediation of the lungs, leads inevitably to the conclusion that the disease may be extinguished by destruction of sputum. It is known that sputum represents something more than a mere culture soil. The sputum contains colonies of the tubercle bacillus. Diluted 400,000 times and injected into the bodies of guinea pigs, it will propagate the disease, and the bacillus, dried in the sputum upon a cloth, will retain its vitality for six months. The destruction of the sputum, outside of the body, is possible, but impracticable. It is impracticable when treating the average case in the home; first, because it is difficult, if not impossible, to make the people understand the real danger of the contagion, as they are not so impressed by the slow and steady advances of tuberculosis as by the rapid invasion and hideousness of smallpox; second, if the laity can be taught the danger we can at best expect them to carry out the details of the disinfection and care of the sputum only in an imperfect manner. But while the sputum may not be destroyed, it may be imprisoned beyond the possibility of release, and in the aggregate, much can be

accomplished in preventing the spread of the disease. So long as the sputum is kept moist, the bacillus is retained in it, as no particulate body may rise from a moist surface.

It must be remembered that nothing about the patient is infectious except the sputum and the material upon which it dries. Institutions for the reception of patients, in which rules for destruction, or retention of sputum are rigidly enforced, furnish, by actual demonstration, an atmosphere most free from infection, so that it is often said that these are the places in which best to avoid the disease.

I will repeat again that one of the first principles in caring for sputum is to keep it moist. Sputum cups should be provided with covers to prevent the entrance of flies, which carry away bacteria both on their feet and in their intestinal canal. At times, use must be made of cloths, which should be changed frequently, and if not burned, should be immersed in boiling water or in a disinfecting solution. The best of these is a 3 per cent. solution of lysol. Cuspidors should never be filled with sand or sawdust, but with water. They should be so constructed that they cannot be upset. The best sputum cups are made of pasteboard and filled with wood-wool, which absorbs rapidly. The cup and its contents are burned every day. When sputum is received into water, it is not necessary to use a disinfectant, provided it is properly disposed of. When a disinfectant is deemed necessary, the best preparations are lysol and solutoe. Both of these have the advantage over carbolic

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acid in that they do not coagulate the sputum, but on the contrary, they liquify it. Spengler found that it required a 10 per cent. solution of lysol to kill tubercle-bacilli in 12 hours. Crude solutol must be present in the proportion of from 5 to 10 per cent. It is understood that these proportions include the amount of sputum, as the disinfecting solution which may be at first from 5 to 10 per cent. becomes diluted by the addition of sputum. Sputum should be disinfected in cuspidors, and not simply discharged into sewers, for Schottelius has shown that bacilli retain their virulence for two years in the lungs of buried bodies. Sputum, in cuspidors with wide mouths, may be mixed with sawdust and burned, or in an institution, the fluid may be boiled half an hour in large vessels, or may be disinfected with the preparations mentioned. The cups, cloths, etc., may be scalded or boiled. I will not stop to speak of the disinfection of bedding, clothing, furniture, etc., as this is usually under the charge of the health officer. This matter should not be passed by indifferently, however, as it is exceedingly important that the health officer should carry out his duty thoroughly. Prevention follows absolutely with conviction as to the infectious nature of the disease.

Prevention consists: (1) In the education of the public in relation to the contagion or the infection of tuberculosis; (2) In police regulations regarding the inspection of tuberculous products in places where many men congregate; (3) in preventing the development of dust on the streets; (4) in the construction of public disinfecting institutions and suggestions as to the disinfection of houses in which the tuberculous have died; (5) in the erection of public institutions for poor, tuberculous patients.

The hope of treatment is based upon the fact universally acknowledged that tuberculosis is often cured spontaneously, and that it more frequently becomes latent or quiescent.

*Action of chemicals.*—Up to the present time, we know of no substance that will destroy the bacillus of tuberculosis in the body, but there are several remedies that inhibit its development. The following statements are made upon the authority of Marfan. Salicylic acid in the strength of 1:500, does not destroy the virulence of the bacillus. Bromin is efficacious in the strength of 1:1000. Phenic acid has a doubtful effect in a strength 5:100 or 6:100, but is caustic. Creosote is without destructive action in a strength of 1:1000. Hydrofluoric acid destroys the bacillus in a strength of 1:4000, but is very caustic. According to Koch, the agents that succeed best in arresting the development of the bacillus of human tuberculosis, *in vitro*, are the essential oils, the aromatics, like beta-naphthol, paratolindin, certain anilin colors as fuchsin, methyl-blue and gentian violet. Next come the mercurial vapors and the combinations of silver and especially those of gold with hydrocyanic acid. Thus gold cyanide prevents the multiplication of the bacillus in a solution as weak as 2:1,000,000. Koch adds, however, that none of these substances suffices to cure a tuberculous animal.

*Therapy.*—Attempts to secure immunity by injecting the blood serum of an animal refractory to tuberculosis, or by serum of a tuberculous animal, after the manner pursued in tetanus, diphtheria, etc., have failed because there is no absolute immunity.

The one specific contribution which we possess is the glycerin extract from the tubercle bacillus, obtained by Koch, and

named by him *tuberculin*. Opinions regarding the virtue of tuberculin, still vary between the extremes. Clinicians, in general, are dissatisfied with the results, while the pure experimentalists in the laboratory continue to observe direct effects. Tuberculin is known to be a product of the growth of the tubercle bacillus in a culture soil of veal broth containing one per cent. of peptone and five per cent. of glycerin. It is extracted with from 40 to 50 per cent. glycerin, so that it keeps indefinitely.

As a therapeutic agent, the value of tuberculin may now be definitely accepted. Its use is contraindicated in the presence of fever and hemorrhage, and in serious affections of the intestine—conditions due to sepsis, and best controlled by creosote and cognac. Tuberculin can be used in only pure tuberculous cases. It is therefore of especial value in incipient cases of disease of the lungs, before sepsis has set in, and in deep-seated or latent tuberculosis of glands or bone. Cases of anemia, amenorrhœa, cold, bronchial catarrh, recurrent or obstinate laryngitis or other of the multiform manifestations of tuberculosis, whose real nature was only disclosed perhaps by a diagnostic dose (1 milligram, 1 per cent. solution) of tuberculin, gradually yield under the continued and judicious use of the remedy. The initial dose should be small (from 0.00005 to 0.00001 grams) and should be gradually increased (avoiding fever) slowly, at first, more rapidly later, up to 0.1 grain. In animals, the injection of tuberculin always suffices to disclose tuberculosis when present, so that the remedy is relied upon absolutely in the examination of cattle.

A few words about creosote. Perhaps of all the remedies recommended in pulmonary tuberculosis, the only one that

holds its place and continues to grow in favor of clinicians, is creosote. Although the mode of action of creosote has not been determined, there is no doubt about the clinical value of the remedy. In this connection, Sommerbrodt cites the statement of Kirchoff, that when theory and practice do not agree, practice is always right.

Weiss observed, in his cases, increased weight, decrease of cough, and increase of appetite. The appetite may become ravenous, and this change is observed, not only in cases of slight involvement of the apices, but also in those in which the disease is advanced. Cases marked by absence of fever, with more or less complete anorexia, are the most benefited, but creosote often exercises a good effect even in the latest course of the disease and in the presence of intermittent fever. When it actually interferes with the appetite, it should be withheld at once and the remedy is contraindicated, when there is diarrhœa or disease of the kidneys.

In passing, it may be well to mention that guaiacol, the volatile essences and sams, and ichthyol have all been less successful than creosote.

(3) Cinnamic acid has been used as an intravenous injection. The merit of having first employed cinnamic acid in the treatment of pulmonary tuberculosis belongs undoubtedly to Landerer, who set himself to work to introduce artificial processes that should imitate those of the natural cure; that is, the conversion of a tissue poor in blood vessels and showing a tendency to caseation into a tissue rich in blood vessels, with a tendency to the formation of granulations and scar tissue. This treatment has not been found practicable.

*Open-air treatment.*—The so-called



open air treatment of pulmonary tuberculosis has been carried out and recommended recently by Beer, Dettweiler and others, especially in sanatoria, as by Brehmer, at Goerbersdorf, Silesia; by Dettweiler, at Falkenstein; by Tarbau, at Davas, Upper Engadine; by Sabourin at Vernet, Oriental Pyrenees; by Lauth, at Lausanne, Switzerland; by Trudeau, at Saranac Lake, New York. It is the established treatment of tuberculosis at the present day and is most completely exhibited in the sanatoria. In a word, it consists in affording the patient pure outdoor air to breath, continuously, both day and night, keeping him out of doors by day and having his bedroom windows open by night, or in many cases having him sleep also out of doors. It seems hardly necessary to add that at the same time due attention should be paid to diet, rest, hydrotherapy, and to all that pertains to the hygienic well being of the patient; hence, this method is also, and perhaps more correctly, termed the hygienic-dietetic treatment. This treatment has been brought to such a degree of perfection that it may almost be said to be independent of climate; that is, it can be successfully carried out wherever there are pure air, freedom from dust, protection from wind, and a moderate amount of sunshine—climatic conditions which are obtainable everywhere, outside of large centers of population.

It seems a very simple matter to conduct such a treatment, but experience has shown that a constant supervision is necessary, in order to keep the patient up, day after day, summer and winter, to this treatment in all its strenuousness; hence the great value of sanatoria and their constant and rapid increase in number.

Even though this treatment is in a measure independent of climate, it is not to be asserted that all climates are equally valuable, for it is obvious that the greater the number of favoring climatic elements, the more perfectly the treatment can be conducted, and the more successful it will be. Hence, such resorts as Dáras, Colorado Springs, Idylwild (California) Asheville, Aiken, and many others of superior climatic excellence are especially favorable for this mode of treatment, provided the other essential factors, such as diet, etc., are at hand.

The conditions of the high and dry climates are best met in our country on the elevated plateaus of Colorado and New Mexico, especially at Glenwood Springs, Colorado Springs, Manitou Springs, Santa Fe, etc. The conditions of moderate elevations, with pure atmosphere, are found in Asheville, N. C., Aiken, S. C., the Adirondack Mountains; while the soft, soothing influences of a balmy atmosphere are provided in Lower California, and especially in the Bermudas and the Bahamas, as at Nassau. Florida is too moist and the air too still for tuberculous patients. It may be thought that this treatment can be accomplished by simply instructing the patient to keep out of doors. Nothing could be more fallacious than this. In the first place, the patient will not keep out of doors all day of his own volition. If he is out for a few hours each day, he is prone to think that he is fulfilling his instructions. Further, he is often left to himself to determine whether he shall remain at rest or take exercise, while in the open; generally he does the latter, sometimes from ignorance, sometimes for want of any proper place where he can remain at rest. Here again comes in the value of a sanatorium

where all these details are carefully looked after.

The theory of the outdoor treatment is, of course, evident; the object is so to improve the nutrition of the pulmonary tissue and general system, and so to harden the patient and thereby increase his resisting power that he will no longer present a favorable soil for the tubercle bacillus.

Are all cases of pulmonary tuberculosis suitable for the open air treatment? Obviously not, for all cases are not susceptible of an arrest or improvement; and the object of the treatment is to cure. Although it is difficult, if not impossible, in many cases and in the various stages of the disease, to form a probable prognosis, still, in general, it may be said that advanced cases with mixed infection and septic symptoms—cases of very extensive disease, those in which the tuberculous process is accompanied by acute symptoms, or those in which the recuperative power seems to be lacking, and the whole system appears to have collapsed, are unfavorable cases and unfitted for the severe regime of the open-air treatment. Fresh air, of course, should be afforded all cases, as to everybody else, sick or well; but this can be done in a well ventilated room, where the patient is made comfortable and kept at rest. If some of these apparently hopeless cases later exhibit more favorable symptoms and develop greater recuperative powers, they then can be more properly subjected to the open air treatment.

Individualization of patients is the keynote of successful treatment of tuberculosis; in nothing is this so manifest as in the selection of the climate or resort to which individuals should be sent.

For sake of convenience one author, Solly, divides his cases into three classes: tuberculous, pneumonic, and catarrhal. Purely tuberculous cases, catarrhal cases, or those combining these two character-

istics, do better in cold, dry climates, while for the pneumonic cases a warm, dry climate is preferable. As a majority of cases met with present the dual character of tuberculous and catarrhal, it may be stated that, in general, curable or arrestable cases do better in a cold, bracing climate, at a moderate elevation of two or three thousand feet above sea level. Again, we often meet patients in whom certain organic heart lesions contraindicate residence at a high altitude or those whose disease is complicated by diabetes, indicating the necessity of moderately high elevation. The more incipient the tuberculosis, the more pure is its tuberculous character, and such cases are better adapted to a high altitude.

Having selected the locality in which it is hoped to effect a cure, it is imperative to impress upon him the necessity of remaining continuously there until the desired end is accomplished. It is difficult for patients to realize the danger they incur by short visits to their homes or lowered altitudes.

It may be pertinently asked if patients do not catch colds under this constant open air exposure. On the contrary, experience has proved that they are less likely to the consequent unavoidable exposure to impure air. The constant exposure to pure germless air, however cold, where one is properly clad, does not render one susceptible "to catching cold," as Nansen so strikingly proved on his Arctic expedition.

In conclusion, it is well to reiterate that the open air treatment is not the whole treatment of pulmonary tuberculosis. In addition, there must be an abundance of nutritious and properly prepared food; rest; a most careful avoidance of over-exertion, either mental or physical; moderate exercise, under careful supervision, and in suitable cases; and due attention to the skin by use of various hydrotherapeutic measures, conducive to the invigoration of the general system, must be adopted.

## The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to Editor B. R. Schenck, 502 Washington Arcade, Detroit, Mich.

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MARCH, 1906

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### Editorial

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With the March issue of the JOURNAL, a new editorial staff assumes charge. It is the desire of the editor and each of the collaborators to make the JOURNAL as interesting to the members of the State Society as is possible.

In filling the pages each month, we shall have two objects constantly before us—first, to make the JOURNAL attractive, so that it will be read, and second, to make it just as scientific as will appeal to the majority of the readers. Above all, we want to make it dignified and a true index of Michigan medicine. These objects can be attained only by the hearty support of every member of the State Society. The JOURNAL belongs to you and the editorial staff invites suggestions and honest criticisms.

It will continue to be the policy of the JOURNAL to keep in close touch with the county societies and the secretaries are earnestly requested to send in papers, abstracts and news items, avoiding as far as possible, mere programs of meetings.

We shall endeavor to present to the members the reports of the State Board of Registration, the State Board of Health and the medical matters which may come up before the State Legislature.

The general make up of the JOUR-

NAL will continue as before, but a slight change in the section on medical progress will be made. Abstracts will appear monthly in medicine, surgery, gynecology and obstetrics, pathology and bacteriology, and therapeutics. Neurology will alternate with pediatrics, laryngology with ophthalmology and syphilis and dermatology with genito-urinary surgery. Reports in actinotherapy, orthopedic surgery and otology will appear every three months. In this way, it is hoped to briefly cover the new work in all departments of medicine, without making any one issue unduly large. In so far as possible, abstracts will be made of articles appearing in journals having the smallest circulation in Michigan, so that the reading matter may not be an old story.

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### A NOTABLE ADDRESS ON RE- CENT PHASES OF IM- MUNOLOGY

A task of unusual difficulty, most excellently executed, was that of Professor Hektoen in his address to the Wayne County Medical Society last month. Even under the author's attractive title, "Immunity in Theory, Experiment and Practice," the topic presented embarrassing features, since it was necessary to seek a comparatively elementary plane of introduction for those not intimately in touch with this line of investigation, to avoid tedious repetition of general aspects ably presented in the lectures of Ehrlich, Prudden, and Welch, and still to supply an intelligent preface for the later developments of immunology. The universally favorable comments by the physicians composing the large audience which greeted the lecturer, bear witness to this successful solution of the problem.



Indeed, the address and its accompanying projection exhibition of beautiful microphotographs, based on Professor Hektoen's original and unpublished work, constituted a conspicuous event in the scientific medicine of Detroit. With the abridgement reluctantly made to meet the author's wishes concerning those portions of the address dealing with previously discussed topics, an abstract is presented in this number of the JOURNAL.

Coming with the authority of one widely recognized as a teacher and investigator whose laboratory is the clearing-house for much meritorious work in the fertile field of immunity, the emphasis laid on the theory of opsonins, as elaborated by Wright and Douglas, and on the promise of practical therapeutic results through the agency of bacterial vaccines, must be recognized as of weighty significance. Behind his conservative expressions, it is evident that Professor Hektoen looks with enthusiastic hopefulness to this most recently exploited phase of immunity which seems destined to application for those pathogenic bacteria, belonging to the large class not producing soluble toxins and not stimulating the production of antitoxins, including the pyogenic staphylococci, streptococci, pneumococci, and the organisms of cholera, typhoid, dysentery, and plague. Especially keen interest attaches to Wright's experiments with tuberculin (tuberculosis vaccine), and to the apparently similar principle underlying the procedure in Behring's widely-heralded treatment for tuberculosis. On the theory of opsonic action the good effects of these vaccines are ascribed to the production of "opsonin," specific for the organism used in inoculation, the opsonin preparing the microbe for destruction

through the agency of leucocytic phagocytes. Even in the face of existing infection, it appears possible to stimulate the latent opsonic power of the blood and thus to assure, advance, or hasten the process of recovery.

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## THE DECLINE OF FOOT BALL

A game for which constant training is essential and in which so many severe injuries are received, is of interest to the medical man, even though he may not be interested in the game *per se*. The decree went forth from Harvard a few weeks ago that there shall be no more football until the game has been reformed to the satisfaction of the board of overseers. Since then, there has been much agitation on the subject in nearly every institution of learning in the country.

This action on the part of the Harvard authorities, though anticipated, was precipitated by the report of Doctors Nicholls and Smith, recently published in the *Boston Medical and Surgical Journal*. The report covers injuries received during but one season and at but one university, yet it is appalling.

At the beginning of the season, the squad numbered 150 but it was soon reduced to about 70 men. Of injuries received, there were 145; among them cuts, requiring stitches, 12; injury to back 12; fractured rib 5; fracture of zygoma 2; broken nose 7; fracture of brim of the pelvis 4; concussion of the brain 19; cerebral hemorrhage 1. Injuries resulted in the loss of 175 days of recitations and lectures. These figures are but a few of the long list given. The authors conclude that football causes more injuries than any other game and that the number of injured players is much greater

than the public or even the students surmise.

A still more interesting and we believe more important conclusion reached is that the game does not, as is generally supposed (at least by its advocates), develop the best type of man, but on the contrary, men whose sluggish nerves have little sensibility to pain, a reversion toward the savage type. Certain it is that the worship of brute force and the commercial spirit have increased, within the past few years, to an appalling extent.

As was pointed out by a speaker at a recent dinner, "the commercial spirit in sport at college means the fostering of the commercial standards which create bosses and insurance scandals."

Had reports similar to that of Doctors Nicolls and Smith been made public before, the death knell of football would have been sounded years ago.

The assistance and co-operation of all physicians, and especially all the mem-

bers of our State Society, are desired by those in charge of the work of compiling the new American Medical Directory. This directory will be different from any heretofore issued, in that it will contain only the names of legally qualified physicians, and will contain no data that has not been verified from the original authorities. If you have not sent in your information, write at once to the American Medical Association for a blank form.

The Committee on Scientific Work held a meeting on January 12th. The program for the Jackson meeting was outlined and a call issued for voluntary papers. It is hoped that there will be a generous response. The local committee of arrangements is an enthusiastic one and there is every promise of a most successful meeting. Jackson is centrally located, easy of access and with the fine entertainment which is promised, the attendance should be large.

## Book Notices.

A COMPEND OF HISTOLOGY. By Henry Erdmann Radasch, M. S., M. D., Associate in Histology and Embryology in the Jefferson Medical College; formerly Fellow in Chemistry in the University of Iowa; etc. Cloth; 5x7 in.; ninety-eight illustrations. Price, \$1.00 net. Philadelphia: P. Blakiston's Son & Co., 1905.

The last to appear of the well and favorably known quiz compends, bound in brown cloth, which are issued by Blakiston, is Radasch's Histology. It is also one of the best. The little book opens with a very valuable section on the technic of preparing sections for histological study, the various formulae of fixing and staining fluids being given and points in their use fully explained. One point in this section which appeals to the reader is the statement of the reason for each step. For example, in the description of the slide technic of staining,—step 12—"cover with a drop or two of creosote for five minutes. This removes the alcohol, renders

the specimen transparent and allows the use of balsam"—the why and wherefore of each point makes the whole more intelligible and interesting than is usual in such a book.

The cell types and various tissues are then reviewed systematically, after which brief but readable descriptions are given of the microscopic structure of the various organs.

The whole subject has been brought up to date and the text is well illustrated, about one half of the cuts being new.

KOPLIK; DISEASES OF INFANCY AND CHILDHOOD. A Treatise on the Diseases of Infancy and Childhood. For Students and Physicians. By Henry Koplik, M. D., Pediatricist to Mt. Sinai Hospital, Ex-President American Pediatric Society, etc., New York. New (2d) Edition. Revised and Enlarged in Text and Illustrations. Octavo, 888 pages, 184 engravings and 33 plates. Cloth, \$5.00; Leather, \$8.00 net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1905.

The first edition of Koplik's work on Diseases of Children proved so acceptable that it was soon exhausted, making a second edition necessary. This has just appeared. There are nearly 200 more pages in this present volume, as well as a number of new engravings from original drawings, showing characteristic conditions.

In the preface, the author says that the literature of pediatrics unfortunately abounds in matter which is theoretical and impracticable and that such matter has been carefully avoided in the book, as it is out of place in a treatise designed for the student and practitioner.

Section 1 contains much interesting matter on the normal infant and child, on methods of examination, on management and hygiene, and on drugs and other methods of therapy. A few interesting quotations may be cited, "There is absolutely no unvarying picture of a normal child, there are limits of variation and these the physician should endeavor to master." In making the examination, "the patient should be completely undressed. This is done as a routine procedure, even in cases of apparently mild illness. Any eruption on the skin is thus forced upon the attention of the physician." "It will be seen from what I have said that I do not believe in the so-called hardening process as applied to children." "Rocking bassinets or cribs are undesirable. An infant accustomed to such a rocking-crib or cradle will not fall asleep unless rocked, and the mother or nurse becomes a slave to the crib."

Section 2, devoted to feeding, is one of the most valuable in the book. The author has given the methods employed by him during twenty years, the experience being gained from a large ambulatory and hospital practice. He says, "though great advances have been made in the past decade, we cannot say that the art of applying certain principles of nutrition to the feeding of infants has attained its highest perfection." To a certain extent the subject is empirical, but it is becoming less so and the "vast majority of children can be fed according to principles well established and laid out at the disposal of the general practitioner." This subject in all its phases, is fully considered, such topics as milk analysis, proprietary foods, maternal nursing, wet nurses, mixed feeding, etc., receiving minute attention. The portion devoted to the household modification of milk is particularly good. Koplik says that if carefully carried out, it can, "boast of just as brilliant results as the laboratory methods." Valuable tables are given.

The next seventy pages deal with the diseases of the new born.

Scarlet fever, measles and typhoid are thoroughly covered. Meningitis and diphtheria are well described and illustrated. Diseases of the digestive, circulatory, respiratory and nervous systems are fully covered. Lack of space forbids a more detailed account of these chapters.

The index is complete. Altogether the book is an excellent one, for the author's style is entertaining and readable. It is a particularly valuable book for a practitioner who is called upon to feed infants artificially and has not a Walker-Gorden laboratory near at hand.

#### BOOKS RECEIVED.

A Compend of Histology, by H. E. Radash, M. S., M. D. Blakiston's Quiz Compends, P. Blakiston's Son and Co., Philadelphia, Pa. 1905.

Proceedings of the Connecticut State Medical Society. Published by the Society, W. R. Steiner, Editor. Bridgeport, 1905.

Transactions of the Indiana State Medical Association, 1905. Published by the Association, Indianapolis, 1905.

Koplik, Diseases of Infancy and Childhood. New (second) edition. Lea Bros. & Co., Philadelphia and New York.

The Practice of Medicine, a Text-Book for Practitioners and Students with Special Reference to Diagnosis and Treatment. By James Tyson, M. D., Professor of Medicine in the University of Pennsylvania, etc. Fourth Edition; revised and enlarged. 240 illustrations. Philadelphia, P. Blakiston's Son & Co. Price \$5.50. (Full notice next month).

Fractures of the Head of the Radius. An Experimental Study and Report of Cases, by T. Turner Thomas, M. D., University of Pennsylvania Medical Bulletin.

#### Reports

January Meeting of the Legislative Council,  
A. M. A.

FLEMMING CARROW,

Michigan Member of the National Council.  
Detroit.

As the Michigan member of the National Legislative Council of the American Medical Association, I have been asked to give a condensed report of an important meeting held in Washington during the month of January.



The matters considered are of great importance to the public welfare, and as a final settlement of most of them is pending before both houses of our National Legislature, it seems urgent that every member of the profession should acquaint himself with the various bills affecting the public service and the public health, in order that each may use his personal influence with his Senator or Representative toward a successful issue of the bills in debate. The Chairman of the Council, Dr. Charles A. L. Reed, presented an address, notable for its masterly treatment of the questions at issue, and his recommendations are most admirably conceived and forcibly argued.

The Army Medical Reorganization Bill is designed to correct glaring defects as to personnel, promotion-rank effectiveness, and definite authority in the medical service of our army.

As at present constituted, the increase of the Medical corps as allowed by Congress, has not been in fair proportion to the increase of the army itself. Unjust discrimination against the medical service has resulted in the resignation of many of our army surgeons, and in an inability to recruit the ranks thus depleted by desirable applicants. The bill also provides for the creation of a Medical Reserve Corps from which recruits to the regular service may be made in case of war, and the giving to members of this corps positive and respectable military rank befitting members of a learned profession.

The Pure Food and Drug Bill received careful consideration at the hands of the Council. This bill was passed in the House of the 57th Congress and was approved by the Senate Committee on Manufactures, but was never considered by the Senate itself. Senator Heyburn has been greatly interested in this bill and has worked most industriously for its passage, but a lively antagonism on the part of the manufacturers of adulterated foods and medicines, secured defeat of its consideration before the Senate. We should all feel a personal interest in this measure, as physicians, because we know the disastrous effects of worthless and impure foods and drugs upon the public, a public unable and not disposed to look closely into a matter upon which it is disqualified to judge.

That there should be three or more distinct qualities of drugs sold, one to the rich and another to the middle classes, while a third is dispensed to eleemosynary institutions and practitioners in the country, is revolting to our sense of fairness and repugnant to common decency.

Continuing, Dr. Reed reports upon the measure for a national incorporation of the American

Medical Association. Our national body does business under a charter issued by the State of Illinois and it was thought that we should have a charter enabling us to transact business in any or all of the states of the Union. After conflicting reports by various committees as to the advisability of a National Charter of incorporation—and since there seemed a disinclination on the part of the Senate to provide a bill giving power for such a charter—the whole matter has been referred back to the American Medical Association with the opinion, that since our corporate and business interests are in Illinois, that it is just as well to continue our business under the charter of that state.

There are a number of bills before the Houses of Congress affecting the public health, which are local in their application. These were all considered in Dr. Reed's thorough report—such, for instance, as *An Amendment to the Lunacy Laws of the District of Columbia—A Law Regulating Inebriates in the same District—The Regulation of Medical Practice in the Government Reservation at Hot Springs, Arkansas—and a Department of Public Health with Representation in the President's Cabinet.*

The report to the Council also called attention to the crusade against nostrums now being so ably waged by the editors of *The Ladies' Home Journal*, and *Collier's Weekly*. The co-operation of the profession is asked, and resolutions are to be presented to the forthcoming meeting of the American Medical Association, requesting that body to empower the National Legislative Council, through a committee, to bring to bear upon the subject the influence of the profession—the various State Legislatures, and Congress, in passing uniform laws, demanding that all patent and proprietary medicines shall have an exact formula of their contents printed on each package. Thus a crusade of education is to be instituted which it is hoped may result in limiting the sale of nostrums.

The report of a committee recommending the restoration of the canteen in the army was adopted, and a suitable draft of a resolution to be presented to Congress in this regard was passed as the opinion of the Council. A most praiseworthy memorial is to be presented to Congress, asking that suitable recognition be made of the services of Dr. James Carroll, a member of the Yellow Fever Commission, who allowed himself to be bitten by a mosquito, infected with yellow fever. Dr. Carroll suffered an almost fatal attack of yellow fever and his case was the first experimentally produced, and in the judgment of the Council should receive

appropriate notice from the Government of the United States.

Several visits of courtesy were made—one upon the President, the Secretary of War, Secretary of Agriculture, Secretary of the Interior, and the various members of the houses of Congress interested in the passage of the bills which concern the public welfare and health. After which, the Council adjourned.

## County Society News

### CASS.

The Cass County Medical Society, at its annual meeting held in Cassopolis, December 28, 1905, elected the following officers for 1906:

President, Dr. E. A. Planck, Union; Vice-President, Dr. M. Holland, Cassopolis; Secretary and Treasurer, Dr. W. C. McCutcheon, Cassopolis. Delegate to the state meeting at Jackson, Dr. J. H. Jones, Dowagiac; with Dr. E. A. Planck, Union, as alternate.

The program of the meeting was as follows: Small-pox, Diagnosis and Treatment, Dr. W. C. Ketcham, Dowagiac. Diagnosis of Typhoid Fever, Dr. E. A. Planck, Union. Echinacea as a Local Dressing in Phlegmons, Dr. W. C. McCutcheon, Cassopolis.

The retiring president then delivered the annual address, extracts from which follow.

W. C. McCUTCHEON, Sec'y.

Abstract of address delivered by Dr. J. H. Jones, retiring President of the Cass County Medical Society.

The march of progress is marked by change. New light is ever dawning, and discovery is the natural order. Such is the history of progress. That the science of medicine has kept pace in the front rank with the other sciences, I contend. That its influence in upbuilding and uplifting humanity is pre-eminent, cannot be denied. Medical science has shorn pestilence of its power, and converted hot beds of disease into conservatories of health. The researcher in the laboratory and the practitioner in the field, work hand in hand for the advancement of medicine. There is no effort of science which may not be exceeded; no depth of research which may not be deeper sounded; no flight of investigation which may not be surpassed. The future holds in trust rewards for earnest work. It is not my object to enter into a review of what medical science has accomplished. So great has been the work, that justly deserved public confidence has been established. On this high tide of success ride

human parasites that prey upon the public under the insignia of our profession. This is an age of greed and graft, and the legitimate field of the medical profession has been invaded by mercenary hordes who are plundering the people. Under the guise of benefactors of the race, they execute their nefarious work. I refer particularly to the co-called patent medicine manufacturers. By an ingenious system of advertising, they depict the common phenomena of fatigue as signs of oncoming sickness, forewarnings of impending disease, and point to their remedy as the only refuge, substantiated by worthless testimonials, which, to the credulous reader, are undisputed evidence. The printing press is a great power, and they use it to win their victories. Take up any periodical, and the eye cannot escape the advertiser's ingenuity, the plea for the sick to become healed, and the well to keep well by the liberal use of their never-failing (?) remedies. When life is the reward of labor, men are apt to be industrious. When men are led to believe that disease may be checked or diverted by some cure-all, they purchase freely. The advertiser plays upon the fear of the reader by a series of meaningless symptoms, and self diagnosing, and self prescribing are the results.

We are told that the American people like to be humbugged, but my observation proves to the contrary. We all know that the American people want an honest deal, and resent any fraud when once discovered. They become such easy victims on account of their unlimited credulity. When Doctors of Divinity and other men, held high in public esteem, lend their influence by portrait and testimony to further such frauds, we may excuse them. But when men, bearing the degree of Doctor of Medicine, aid and abet such work, there is no excuse. It is a sad example of diverted influence. So persistent and far-reaching is the working of these frauds that they sometimes invade the dispensary of the physician. The medical press is made an instrument to herald the false claims of the manufacturer. Medical men sometimes compromise themselves, and reproach the profession by attesting to the virtues of worthless mixtures. The medical profession should demand that their journals be cleansed from the taint of questionable advertisers. Many so-called ethical preparations are advertised to the laity as well as to the profession. An endless stream of gratuitous literature floods the doctor's table vaunting the value of worthless nostrums. Harmful and dangerous drugs are thrown daily at our doors, a little bait to catch the unwary. These frauds are a menace to the people. Laws should be enacted to pro-



hibit them. We have pure food laws and food inspection, and it is of equal importance that we have laws to control these gigantic frauds. The medical fraternity should work as a unit, and through the county, state and national associations influence legislation for the good of humanity.

Series of articles have appeared the present year in the *Ladies' Home Journal* and *Collier's Weekly* exposing these frauds. These articles are worthy the perusal of every individual, and the publishers deserve the hearty support of the medical fraternity. It is the duty of the physician to maintain the dignity and honor of his profession. There is no profession in which so much good may be accomplished. There is no profession in which so much evil may be wrought. There is no profession which comes so near to the heart of humanity. What confidences are ours, and with what fidelity do we hold that sacred trust! The true physician does his duty in the light of conscience, feeling that there is no nobler mission than duty, no truer guide than conscience. Many people deplore the rarity of Christian charity. If any one wishes to see charitable work exemplified, look to the record of the medical profession. There is no one under the sun who does so much for charity as the physician. He often wraps the draperies of his couch about him with no other compensation than the satisfaction of a service rendered to humanity. We are engaged in a great work. There is no calling with nobler aims, no vocation with greater responsibilities. We must stand together. We need the strength which comes from unity, the power which results from co-operation. We need each other's aid in our heroic work of alleviating suffering, and prolonging human life.

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#### CHIPPEWA.

The fourth annual meeting of the Chippewa County Medical Society was held at the Park Hotel, Sault Ste. Marie, on December 5, 1905. The following officers for 1906 were elected: President, Dr. Robert Bennie, Sault Ste. Marie; Vice President, Dr. C. A. Person, Sault Ste. Marie; Secretary, Dr. A. H. Miller, Sault Ste. Marie; Treasurer, Dr. P. B. LeBlanc, Sault Ste. Marie.

A. H. MILLER, Sec'y.

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#### DELTA.

At the last meeting of the society, the following resolution was adopted:

"Resolved, That, we, the members of the Delta

County Medical Society, vigorously protest against the registration of births, by physicians, without compensation."

H. W. LONG, Sec'y.

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#### EATON.

The Eaton County Medical Society held its regular meeting at Grand Ledge, on January 25. Dr. Hal. C. Wyman, of Detroit, read a paper on "Appendicitis: How to Differentiate Between Medical and Surgical Cases." Dr. P. H. Quick, of Olivet, read a paper on "Ancient and Modern Medicine." The next regular meeting of the Society will be held at Vermontville, in April.

W. H. ENDERS, Sec'y.

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#### EMMET.

At the annual meeting of the Emmet County Medical Society, held January 17, 1906, Dr. G. W. Nihart was elected President, and Dr. G. E. Reycraft, Secretary-Treasurer, for the ensuing year.

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#### GENESEE.

The meeting held January 23, 1906, was attended by about 20 members.

Dr. J. N. Buckham, of Flint, was elected delegate to the State Society meeting in Jackson. Dr. E. D. Rice, of Flint, was elected alternate.

Dr. H. D. Knapp, of Linden, Dr. R. G. James, of Gaines, Dr. J. H. Houghton, of Flushing, and Dr. C. L. Scoutten, of Clio, were elected to membership.

The Genesee County Medical Society voted to invite the Sixth District to hold their meeting here in the summer, when Dr. MacCormack will be in the state, and have him present.

Dr. Reuben Peterson, of Ann Arbor, gave a talk on his operation for shortening the round ligaments and illustrated it by lantern slide demonstrations of the various steps. The paper was discussed by Doctors Murray, Rice and Goodfellow.

At 5 P. M., a banquet was held in the Dryden Cafe and after this the meeting listened to a paper by Dr. Tupper, of Flint, on "Labor." This paper brought out a very free discussion.

J. G. R. MANWARING, Sec'y.

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#### INGHAM.

The mid-winter meeting of the Ingham County Medical Society was held on January 11, at Lansing. President Hagadorn was in the chair. Fifteen members and six visitors were present. Dr. J. F. Campbell was elected dele-



gate to the State meeting. Dr. S. H. Culver was elected alternate. Committees for the year were announced as follows:

Legislation—O. H. Freeland, F. A. Jones, C. H. Brucker.

Public Health—F. D. Shumway, R. E. Miller, F. E. Thomas.

Program—J. D. Hagadorn, G. B. Wade, O. H. Freeland, O. H. Bruegel, L. Anna Ballard.

Dr. Clara M. Davis was elected to membership.

Prof. C. E. Marshall of the Michigan Agriculture College gave an interesting address upon, "Milk, Bacteria," with chart illustrations. Dr. Frank Shumway, secretary of the State Board of Health, read a paper upon "Health Officers, their Duties and Responsibilities". (These papers will appear in full, in the JOURNAL.)

The following resolution was presented by Dr. J. F. Campbell and adopted by the society:

WHEREAS:—We, the Ingham County Medical Society, assembled in regular session on January 11, 1906, believing that in the interests of public health, and as a further aid to the profession of the State that there should be a Chemical and Bacteriological department under the direction of the State Board of Health at Lansing, therefore,

*Resolved*, that all honorable means shall be employed by members of this society to further the passage of an act by the Legislature creating this department and providing by appropriation for its equipment and maintenance.

Dr. B. Nottingham, health officer of the city of Lansing, presented a paper favoring the establishment of a State department on Bacteriology, also for medical examination of pupils in schools, and in support of the State Board of Health in including pneumonia and tuberculosis among the contagious diseases dangerous to the public.

L. ANNA BALLARD, Sec'y.

#### MONTCALM.

Montcalm Medical Society held a fine meeting at Sheridan, on January 11, 1906, and was well entertained by the local fraternity of that place.

Dr. W. P. Gamber, of Stanton, was elected delegate to the Jackson meeting, and Dr. D. K. Black, of Greenville, alternate.

Dr. F. A. Johnson read a paper on "The Treatment of Pulmonary Tuberculosis," which was well received. (Printed in full in the current number of the JOURNAL.)

Upon motion of W. P. Gamber, the following resolutions were unanimously adopted.

H. L. BOWER, Sec'y.

*Resolved*, That the Montcalm County Medical Society expresses its hearty approval of the action of the American Medical Association in establishing the Council of Pharmacy and Chemistry and indorses their work of investigating non-official drugs and medicinal preparations, and heartily commends the good work of the Journal of the American Medical Association in its campaign of educating the medical profession concerning the evils of secret nostrums and urges it to continue in the good work.

*Resolved*, That the members of the Montcalm County Medical Society, as physicians, have the right to know the composition of all drugs used by them, and it is their duty to refrain from using such articles as do not contain on the label attached, the ingredients of which they are composed.

*Resolved*, That this society extends its heartiest thanks and earnest commendations to *Collier's Weekly* and the *Ladies' Home Journal* in their vigorous campaign against this great "American Fraud,"—exposing the fraudulent methods used by these venders of "Patent Medicines," and for the efficient manner in which they have shown the evil effects of these secret nostrums, and urge their continuance of this splendid work.

*Resolved*, That copies of these resolutions be sent to the editors of the Journal of the American Medical Association, the Journal of the Michigan State Medical Society, *Collier's Weekly* and the *Ladies' Home Journal*.

#### WAYNE.

**General Meeting, January 15, 1906.** Dr. Ludwig Hektoen, Chicago, delivered an address: "Immunity in Theory, Experiment and Practice," an abstract of which appears in the current issue of the JOURNAL.

The address was illustrated by microphotographic lantern slides.

Dr. David Inglis: Does modern investigation explain remote results of infections, as permanent acquired immunity, and parasymphilitic lesions?

Dr. Hektoen: Once-immune animals reacquire active immunity by inoculation with an amount of the particular antigen so small as to affect practically not at all, animals that have never been immunized. The cells of the once-immune animal are probably more readily stimulated to production of antibodies. Apparently permanent, acquired immunity may thus be explained as readily renewable immunity. Modern investiga-

tion does not yet throw light on parasymphilitic lesions.

A unanimous vote of thanks was extended to Doctor Hektoen, and an informal reception and smoker held.

#### Meeting of Surgical Section, Jan. 22, 1906.

Dr. L. E. Loucks exhibited two cases of undeformed union of the lower maxilla after fracture. One case had been wired through inside incision, and the other held by a special splint.

Dr. Arthur L. Worden exhibited for diagnosis a patient with a general, blotchy, wheal-like exanthem. Dr. H. R. Varney stated that the case did not resemble scabies, or "Cuban itch," which is probably the same as scabies; that, in the absence of any other evidence of syphilis, the case was to be regarded as a somewhat unusual urticaria; that the principle of treatment was to discover and remove the cause, and to lessen the dermal irritation. The patient had been strongly anointing himself with sulphur ointment, believing that the cause of the trouble was parasitic.

Dr. C. S. Oakman presented the paper: "A Discussion of Some Closed Fractures That are Amendable to Early Operative Treatment." This paper and the discussion of it will appear in full in the April issue of the JOURNAL.

**General Meeting, Jan. 29, 1906.** Dr. H. O. Walker exhibited the gross specimens from a pylorectomy for carcinoma, from a thyroidectomy for dyspnoea in exophthalmic goitre, and from a hysterectomy for a vascular malignant neoplasm.

Dr. Arnold Lorand, Carlsbad, Austria: Graves' disease and diabetes are closely related, and are more frequent than commonly believed. It has been proved by animal experimentation that hyperthyroidism alone can produce diabetes; thus excessive amount of meat, which tends to hyperthyroidism, is to be avoided in diabetes.

Dr. David R. Clark, Dearborn, presented the paper: "Some of the Salient Features of Dementia Praecox." The gradual, progressive mental enfeeblement without special physical change—and this essentially characterizes dementia praecox—is likely to manifest itself by inattention, emotional loss, failure of good judgment, and impairment of will. Some of the symptoms therefore, will be stupor, mannerism, stereotyped actions, negativism, automatic obedience, and catalepsy.

Dr. C. W. Hitchcock presented the paper:

#### "A CASE OF DEMENTIA PRAECOX OF MEDICO-LEGAL INTEREST."

It is often a nicety to determine that degree of mental impairment which shall exempt from pun-

ishment from crime. Responsibility of examiner is a grave one and his duty should be conscientiously and carefully performed.

This case is that of a man, 26 years of age, whose father presents an ill shapen (dolichocephalic) head, and who cannot read or write; whose mother is evidently much demented, apparently never above the plane of a (possibly) high-grade imbecile. One of her brothers (maternal uncle of prisoner) was an inmate of a German asylum. A brother of the prisoner died insane, a patient in the Michigan Asylum at Kalamazoo, a case of irritable dementia praecox.

The respondent presents a very narrow and high-arched palate. He has been a farmer and a fisherman and for nearly a year past had been a dairyman at the State Asylum for Insane Criminals, from which institution he was discharged, owing to certain eccentricities of speech and conduct, which had then been noted just prior to his discharge. The authorities there had not deemed him a dangerous person to be at large, and so had permitted him to take a train for Detroit. From there he apparently started at once for Monroe, but felt impelled to leave the car at Trenton. Here he proceeded to buy a revolver and cartridges, and made his way at once to the house of his godmother, a woman some 56 years of age. He entered the house, walked into her bed-room, deliberately shot her repeatedly as she lay in bed, then beat her with a chair, leaving the house by the door by which he had entered, and, going to a hotel, he slept all night. He returned to Detroit the next day and there sought a policeman, to whom he surrendered himself and confessed his crime.

He was examined by a commission appointed by the court to determine as to his sanity. It developed that this was only one of a number of purely impulsive minor acts of which he had been guilty during a period of some two weeks or so. He had given expression to rather vague ideas of persecution, having threatened to leave his work because of fancied differences with others, which had no foundation whatever in fact, had proposed marriage, just before leaving the institution, to a woman, with whom he was not specially acquainted, and had otherwise shown a state of mental confusion, although he had done his work faithfully right along.

Admitting his criminal act, he had expressed no adequate regret or repentance, could assign no motive to explain, other than that he felt impelled to leave the car at this point and to go to this house and kill this woman. He admits that he bore her no ill-will and had no

difference with her of any kind. He says: "Just seems as if I had to."

His act, evidently the result of an unsound mind, seems to have been one of those purely impulsive acts, which are frequently known in dementia praecox and the nature of the act, the prisoner's attitude thereto, his recently previous history indicating evident mental infirmity, all seem to warrant the diagnosis of dementia praecox for the building of which his physical and mental heritage gave excellent ground. That it was an act, the direct offspring of his insanity and one for which he could not therefore be properly held responsible before the law, the commission which examined him was well satisfied, and so reported to the court, by whom he was committed to the institution where he had been so lately employed. (Author's abstract.)

Dr. J. E. Emerson: Typical cases of dementia praecox with all the reported symptoms are not found. The symptom-complex varies greatly, not only with the particular form, but also with the individual case. Diagnosis is arrived at by consideration of the case as a whole in light of its progress.

Dr. John Flintermann said that upon reconsideration he could not satisfy himself that the case reported should be classified as dementia praecox. Epilepsy and the resultant mental weakness were to be considered. On the whole, the case could not be classified in any of the forms of insanity. Diagnosis, where possible, however, is important, as it may forewarn against danger. In a case of melancholia, in which he had unavailingly advised restraint, the patient killed himself.

Dr. Arnold Lorand, Carlsbad, Austria: Experimental excision of the thyroid is followed by nerve degeneration and great somnolence. Clinically, mental deterioration is associated with those diseases in which the thyroid is affected, as in cretinism, myxoedema, Graves' disease, and the sleeping sickness. The blood of animals whose thyroids have been excised has been successfully used for insomnia. The relation of the ovaries, as well as the thyroid, to the mind is shown in pregnancy and katamenia.

Dr. Minta P. Kemp reported a series of fifteen or twenty cases in which the prognosis appeared to be good for recovery.

Dr. Clark: Epileptiform seizures, as in the case reported, are not uncommon in dementia praecox. Mental degeneration is mental disease; the demonstrative incidents constitute insanity. Dementia praecox as a mental disease is continuous; the periods of insanity are intermittent.

Dr. Hitchcock said that he was unwilling to let the case reported go unclassified, and that he believed that it conformed to the type of insanity known as dementia praecox.

The following delegates were appointed to represent the society at the next meeting of the State society:

Dr. W. S. Anderson, alternate Dr. D. M. Campbell.

Dr. P. M. Hickey, alternate Dr. M. V. Meddaugh.

Dr. L. J. Hirschman, alternate Dr. B. R. Hoyt.

Dr. Emil Amberg, alternate Dr. C. S. Oakman.

Dr. W. H. Hutchins, alternate Dr. W. E. Blodgett.

Dr. D. R. Clark, alternate Dr. J. E. Davis.

Dr. Louise R. Thompson, alternate Dr. Minta P. Kemp.

WM. E. BLODGETT.

## Medical News

The Noble prizes for 1905 were awarded to: Philip Lesnard, Kiel, for researches on cathode rays; A. von Baeyer, Munich, for work in chemistry; Robert Koch, Berlin, for his recent work on the prevention and cure of tuberculosis; Henryk Sienkiewicz, for the lessons in patriotism, taught by his Polish historical novels; Baroness von Suttner, Vienna, for her labors in the cause of international peace.

These prizes are from the interest on a large sum donated by Alfred Noble, the inventor of dynamite, and are awarded yearly to those who have most helped humanity by scientific research, helpful literature and by the promotion of peace.

We clip the following from the Bulletin of Vital Statistics: The Department has had several communications recently, relative to the constitutionality of the law for the registration of births which went into effect January 1st, and for the benefit of all those interested, we publish the following opinion from Hon. Henry E. Chase, Deputy Attorney General, which fully explains itself:

December 21, 1905.

Hon. George A. Prescott,  
Secretary of State,  
Lansing, Michigan.

Dear Sir:—

Yours of the 19th, enclosing copies of letters from Drs. E. A. Hoyt, Orson Millard, J. Williams, Jr., Fred R. Belknap, G. M. Livingston, and



George C. Gordon, relative to Act No. 330 of the laws of 1903, received.

The question presented by the doctors seems to be the constitutionality of the law; contending that it does not provide compensation for physicians making certificates of births, and filing same, in accordance with the requirements of said act. That is not a constitutional objection. It violates no section of the constitution. The constitution of Michigan does not require that a law shall carry with it compensation for every service performed under and in accordance with it.

Yours respectfully,

(Signed) HENRY E. CHASE,  
Deputy Attorney General.

A movement is on foot in Columbus for the establishment of a physicians' club and library in that city.

The death of Prof. Ernest Ziegler, the eminent pathologist at the University of Freiburg, occurred last month. Ziegler's Text Book of Pathology is known the world over.

A provision in the will of the late Mr. Yerkes, provides for the establishment of a large general hospital in the Bronx, New York. The fund was to be available only on the decease of Mrs. Yerkes, but it is understood that she will immediately proceed with the plans for the buildings.

According to the *Lancet-Clinic*, the 1907 meeting of the American Medical Association, may be held in Cincinnati.

The lay press have been circulating the rumor that Doctor Osler has resigned the Regius professorship of medicine and will return to Baltimore. Doctor Osler's visit to America this year was according to a prearranged plan and there is no foundation for the rumor.

The attendance at the Boston Tuberculosis exhibition, held in January, was 24,560. The value of the dissemination of knowledge by means of these exhibitions cannot be overestimated. *Why not one in Michigan?*

In 1903, *The Interstate Medical Journal*, published in St. Louis, began publishing an "Annual Progress Number." The January number contains 13 articles on the various branches, which reflect great credit on the authors and editor. Taken together, they make a brochure of 216 closely printed pages, which will well repay close study.

A bill has been introduced into the Iowa legislature providing that the containers of all patent medicines shall show the ingredients and their amounts present in the medicine. Such a measure, it is expected, will greatly reduce the sale of these nostrums.

A well attended meeting under the auspices of the Academy of Medicine, held in Detroit on February 7th, was addressed by Baron Takaki, of Tokio, who is in America to deliver the Cartwright Lectures before the Alumni Association of the College of Physicians and Surgeons, New York.

Takaki entered the Japanese Navy in 1872, and becoming interested in the large mortality and sick disability in the navy, caused by kaki, or beri-beri, as it is called in English, was sent by the Japanese government to England to make further studies. Here he remained for five years and returning, was able to practically stamp out the disease by certain dietary reforms.

Not the least interesting portion of his Detroit address was devoted to the description of the methods which were employed in the late war, by means of which the death rate from disease was but one fourth that from wounds. In every other war the figures have been reversed, four times as many men dying from disease as were killed in action.

Baron Takaki was Surgeon General of the Navy in the Japan-China war.

The Grand Rapids Anti-Tuberculosis Society held an enthusiastic meeting late in January. Distinct progress was shown in the effort to stamp out the disease in that city.

Among other things accomplished, has been the passage of the anti-spitting ordinance and the regulation requiring physicians to report cases of consumption. The society also aided in the passage of the appropriation made by the State Legislature for the establishment of a sanatorium. Since November, a visiting nurse has been employed in visiting the homes of tuberculosis patients, giving them instruction as to proper treatment and securing precautions for the protection of uninfected members of the family. One hundred ninety such visits had been made.

The Fifteenth International Congress of Medicine will be held, under the patronage of the King, at Lisbon, April 19 to 26. Any reader interested in the subject may obtain literature from the Secretary of the State Society.

A sanitary dairy has been established near Kalamazoo. It is designed to furnish pure milk for infant feeding.

The appropriation asked for by the Detroit Board of Health amounts to \$52,371, an increase over that of 1905 of \$7,500. It is desired to increase the efficiency of the medical inspection of school children and this is estimated to cost \$4,200.

In a review of a recent book on Psychiatry by Paton, the *Johns Hopkins Hospital Bulletin* says: "The one urgent need of the immediate future in American psychiatry is an institution, hitherto quite unknown on this side, but whose advantages Europe has long enjoyed, namely, the University Psychiatric Clinic. As the best example of the up-to-date insane hospital may be mentioned the new institution at Munich, completed last year, which is a type of the best fruits of modern intelligence in the construction and arrangement of clinics for the insane, for the most advantageous study and treatment of patients, and the purposes of clinical instruction. This institution has recently been the subject of an elaborate monograph by the director, Prof. Kraepelin (Barth, 1905, 2M) and was also briefly described by Paton in Science."

Shortly after this appeared, the new Psychopathic ward was opened at Ann Arbor and Michigan is to be congratulated on being the first state to establish such a clinic.

The objects which are to be attained have been stated by the originator of the movement, Dr. W. J. Herdman, as follows:

(1) To obtain more accurate knowledge as to the nature and causes of insanity. (2) To make clear the way for the removal of certain of these causes. (3) To effect cures in some cases that are now practically incurable. (4) To relieve the state of the burden of care and expense of those thus restored to health. (5) To stimulate and make more purposive the work of observation, investigation and treatment of all the patients in all of our hospitals for the insane. (6) To give to him and her who will first have the opportunity to see and treat cases of mental disorder a correct knowledge of its nature and so enable them—the family physicians—to render intelligent help at a time when treatment of the right kind is most beneficial. (7) And last, but by no means least, to create a correct public sentiment and belief with regard to all ailments which affect the mind and so educate the people as a whole to rational views both as to preven-

tion of such diseases and the proper treatment of those so afflicted.

The provisions of the law may be thus briefly stated:

"Patients may be sent to the Psychopathic Ward either directly by the judge of probate by whom they are examined as to their sanity, or from any of the state asylums for the insane. Patients are to be thus sent when either the superintendent of such asylum or the probate judge shall be of the opinion that the condition of the patient's mind is caused by some malady or disease that under the treatment of a specialist might be cured and the patient restored to sanity. An inquiry by the judge of probate into the probable benefit by treatment in such Ward to any person brought before him for commitment to any state asylum for the insane, is made obligatory, and he is to have, if desirable, the assistance of three competent physicians.

When patients thus sent to the Psychopathic Ward shall recover, they shall be forthwith discharged. Should a patient fail to recover, then, upon certificate of the head of the department of nervous diseases of the hospital of the University, that such patient is insane, the patient shall be at once confined in such state asylum as the judge of probate shall designate, or shall be returned to the asylum from which he was transferred to the Psychopathic Ward.

The same provisions for county or state support apply as apply to patients confined in the state asylums. Patients supported by relatives or other private means, shall pay the regular charges fixed by the Regents for other patients in the hospital.

The accounts of the Ward are to be kept by the superintendent of the University hospital, to be sworn to, and filed with the treasurer of the University.

The Psychopathic Ward shall be under the general control of the University hospitals, and the superintendents of the various state asylums for the insane are made members of the clinical staff of the Psychopathic Ward.

Compensation to any physician, surgeon, or officer of the University for care or treatment of patients in the Ward, beyond that received from the Regents of the University, is prohibited.

The superintendent of the hospital must annually report to the Governor the cases treated in the Ward and the result of the treatment.

Relatives and friends of patients sent to the Ward are not prevented from choosing which school of medicine shall have charge of the patient's treatment.

A penalty is provided for neglect or infraction of the act."



## Michigan Personals

Dr. Edward Huber of Iosco has taken the practice of Dr. Tillapaugh, of Plymouth. The latter expects to remove to New York.

Dr. Roger Morris, late first assistant in the medical clinic at Ann Arbor, has accepted a position on the medical staff of the Johns Hopkins Hospital, Baltimore.

Dr. R. W. McLain, of Allen, announces his retirement from practice.

Dr. A. F. Kingsley, formerly of Centerville, has removed to Battle Creek.

Dr. J. L. Remilliard, late of Iron Mountain, has removed to Beaver, Ill.

Dr. C. H. Merrill recently left Marshall for Philadelphia, where he has a position in the United States Marine Hospital Service.

Dr. A. H. Eber, of St. Clair, has entered the medical service of the army.

The address of Dr. B. D. Harison, Secretary of the State Board of Registration, is 303 Whitney Building, Detroit.

Several members of the faculty of the University of Michigan were honored by election to offices in the various academic and scientific associations which met throughout the country during the holidays. A partial list of these elections follows: Dr. J. Playfair McMurrich was elected president of the American Society of Naturalists and Affiliated Scientific Societies, and a member of the council of the Association of American Anatomists, at Ann Arbor, Dec. 29. Dr. Frederick G. Novy was elected a member of the council of the Society of American Bacteriologists, at Ann Arbor, Dec. 29. Dr. Victor C. Vaughan was elected a member of the council of the Society of American Bacteriologists, at Ann Arbor, Dec. 29.

New appointments on the staff of Harper Hospital are as follows: Dr. Max Ballin, consulting surgeon; Dr. Guy L. Kiefer, contagious disease department; Dr. Eugene Smith and Dr. Flemming Carrow, consulting ophthalmologists; Dr. E. L. Shurly, consulting laryngologist; Dr. B. R. Shurly and Dr. Willis S. Anderson, attending laryngologists; Dr. J. A. MacMillan and Dr. L. J. Hirschman, attending proctologists.

Changes on St. Mary's hospital staff, Detroit, include consulting gynecologist, Dr. N. W. Weber; consulting neurologist, Dr. David Inglis; consulting laryngologist, Dr. E. L. Shurly; attending surgeons, Dr. F. W. Robbins and Dr. Frank B. Walker; attending gynecologists, Dr. M. Brady, Dr. W. A. Repp and Dr. Theo. A. McGraw, Jr.; attending dermatologists, Dr. A. E. Carrier and Dr. A. P. Biddle; pathologist, Dr. E. H. Hayward.

Dr. R. A. Race of Adrian has taken the practice of Dr. M. B. Prentis of Hudson.

Dr. F. A. Shumway, Secretary of the State Board of Health, delivered an address at the annual meeting of the Michigan Engineering Society, held at St. Ignace, January 18. The sanitary aspects of municipal sewerage and water supply systems was chosen as the theme.

## DEATHS.

Dr. Samuel P. Wooster, aged 76, the oldest physician in Grand Rapids, died on February 6. Doctor Wooster was born in New Haven, Conn., and came to Michigan shortly after his graduation.

## IN MEMORIAM.

George Archie Stockwell died at Houston, Texas, January 28, 1906, of apoplexy.

He was born at Binghamton, N. Y., December 19, 1846, and came with his parents to Port Huron in 1851. He entered the U. S. Navy in 1865, being purser's steward on one of the monitors.

Doctor Stockwell graduated in medicine at the Albany Medical College in 1868 and after practicing a few years devoted himself to literary work on medicine and natural history. He traveled much and lived for a time with the Northwest Indian tribes, afterwards writing interestingly of their medicine men and religious mysteries. He was later called to the editorship of *Forest and Stream* and was for a time on the staff of the *Scientific American*.

For several years Doctor Stockwell was editor of the *Medical Age*, and for a short time of the *Detroit Medical Journal*. He was the author of many valuable and interesting articles, and as an author was clear, forceful and interesting.



He was a member of the national, state and district societies, of the New Sydenham Society of London, Eng., and was made a Fellow of the Zoological Society of Great Britain for his researches and writings in the field of natural history. He was a man of genial disposition, a gifted writer and a fine conversationalist.

M. WILLSON.

## Correspondence.

*To the Editor of the Journal:*

Page 124 of the Journal of the Michigan State Medical Society (February, 1906) contains some remarks in regard to the free treatment of the well-to-do at the university hospitals. It is entirely against my taste to enter again into the controversy in regard to the conditions mentioned. After a great many arguments have been considered, and after many opinions have been aired, many of these in the presence of the Board of Regents, it is my firm impression that the medical profession of the State of Michigan is right beyond a doubt. Anybody familiar with the subject knows that the matter has reached a stage in which a solution of the difficulty has been recognized as imperative. It is conceded by some that circumstances ask for forbearance in time and means. Most decidedly I cannot agree with the statements referred to on page 124. Remarks of that nature are liable to discredit the commendable work which has been done by the medical profession of the State of Michigan. Besides, they might cast a reflection upon those who have acted in good faith and who have been in the right without a question. I ask anybody to inspect either in person or by a representative the material in my possession and to receive such additional information as I shall give according to circumstances. The facts brought before me by members of the medical profession and the demands made of me by them place me in a position in which I must oppose any attempt from any source which may try to make a state of affairs, which is very clear, appear uncertain and cloudy.

I repeat, the material in my hands can be inspected at any convenient time, and I can leave it to anybody to form his own opinion on the subject.

EMIL AMBERG,

Former Michigan Member of the National  
Legislative Council of the American  
Medical Association.

February 8, 1906.

**Some Problems in the Treatment of Pneumonia.**—Egbert Le Fevre believes that the primary and essential action of the toxemia of the pneumococcus infection is that of stimulation. Restlessness and sleeplessness, and in children convulsions, are the expression of its effect upon the general nervous system. The writer thinks that the exhaustion noted later in the disease is a natural sequence of the stimulation of the early period, and follows the excessive work which has been done by the respiratory and circulatory systems. Accepting these facts, he declares that from the very beginning the physician's every effort should be directed toward controlling the toxemia and its effects. He advises employment of the methods which have been found most efficient in other acute and chronic toxemias—catharsis, diaphoresis, and diuresis. Care should be taken, however, that the treatment does not exhaust the patient. Unless contraindicated, the writer uses saline cathartics freely during the early days of the disease. If the toxemia is exaggerated the same external methods for causing sweating should be employed as those used in the treatment of acute uremia. He warns against the use of pilocarpin, but advises the use of hot drinks, liquor ammonii acetatis, and citrate of potassium. As there is generally kidney irritation in this disease, abundance of water is indicated. If there is nausea and vomiting so that the administration of water by the mouth is restricted, enemas of normal saline solution should be substituted. Venesection is indicated in those cases in which the patient seems to be overstimulated by the toxemia. Fresh air is necessary, but cold is not an essential element of the open-air treatment. The writer advises keeping the room at about 65° F. In cases in which there is pain, opium or one of its derivatives, as a rule, has the best effect. The writer condemns the tendency to resort to nitroglycerin in cases in which cardiac failure is suspected. He advises two classes of stimulants to be used in cases of loss of vasomotor control: (1) Those acting on the medullary centers—strychnine, caffeine, atropine, and cocaine; (2) those acting directly on the muscular tissue of the arterial system—digitalis, ergot, and suprarenal extract. The action on the blood vessels of suprarenal extract or adrenalin chloride is very rapid and energetic, but its effects are temporary. It should be used in the treatment of sudden vascular collapse. No case of pneumonia should be given up until death actually takes place.—*Medical Record*, February 24 1906.

## Progress of Medical Science.

### MEDICINE

In charge of  
H. S. OLNEY

**The Medical Aspects of Carcinoma of the Breast.**—Osler writes on mammary cancer as seen by the physician, either at the outset of the disease or, in the late stages, as victims of internal metastases. The extent of the latter, it must be remembered, bears no relationship to the size of the tumor, for extensive general lesions may be associated with a small latent carcinoma.

In two thirds of Osler's cases, both breasts have been involved. One of the common observations is direct extension of the disease through the chest wall to the pleura or, more rarely, to the lung, with secondary involvement of the lymph glands. Pleurisy, with effusion, may come on insidiously, the only symptom being shortness of breath. Sometimes there may be severe pain. It is often difficult to decide whether or not the pleurisy is of a cancerous nature.

All the distressing pressure symptoms of tumor may be produced by glandular enlargements within the thorax, even though there be no signs of recurrence and no physical signs. As a rule, however, there is flatness on percussion and often disease of the sternum itself. The glands above the clavicle may be enlarged. Involution of a mediastinal growth may sometimes occur. Carcinoma of the lungs, secondary to carcinoma of the breast, is rare.

Direct extension may cause carcinoma of the peritoneum and recurring carcinomatous ascites is not uncommon. In such cases, the tumor in the breast may be latent or may be concealed by the patient.

Metastasis to the liver is more frequent than to any other organ, the liver becoming enlarged, irregular and nodular and the patient deeply jaundiced.

Metastases in the cranial bones or in the brain itself may cause cerebral symptoms. Among the most common and most painful secondary manifestations are lesions of the spine. They are most common in the atrophic form of scirrhus. Any part of the spine may be involved. Now and then such secondary growths become sclerotic and, shrinking, cause a decrease of the pressure symptoms. These usually occur in two stages (1) neuralgic, indefinite pains in the head, appearing from two months to two years after operation. Shingles is a frequent complication of this stage. (2) In most cases, usually a pressure paraplegia,

often of the spastic type, resulting in the picture of paraplegia dolorosa.

In conclusion, the author emphasizes the necessity of giving morphine in sufficient doses to control pain.—(*British Med. Jour.*, Jan. 6, 1905.)

**Opium in Myocarditis, Weak Heart and Dilated Heart.** Musser says that there are sound clinical reasons for the belief that opium is a tonic in cardiac debility. Who has not seen the flagging heart of shock, induced by pain or other depressive measures, brought up by morphine? Who will not prescribe this drug in the sudden heart failure of myocarditis? Who does not give it in rheumatism for its tonic cardiac effect? Musser pleads for the continuous use of opium or morphine, also in myocarditis, to prevent angina pectoris or to lessen the effect or defer the dreaded asystole. He has had patients take, for months and months, small doses of the deodorized tincture or the extract of opium, thereby checking waste, reducing the susceptibility to peripheral sensations and replacing exciting stimulants, such as alcohol or strychnine, calming a perturbable nervous system and lessening the necessity for food to the relief of digestion, metabolism and elimination. 卅卅

In cases of weak heart, following exhausting diseases, after prolonged mental and physical pain and when not associated with organic changes in valves or muscle, opium is of advantage. In cases of failing compensation, with the onset of stasis, the heart is supported, especially if the unfortunate possessor is an impressionable subject who frets and fumes because of the ordinary irritations of life.

In the gradual engorgement from myocardial dilatation, in chronic parenchymatous nephritis and in arterio-sclerosis, it is of value. If the patient is hypochondriacal or hypersensitive, the second daily dose of opium invites sleep and induces a feeling of well being.

The dyspnoea of myocarditis is relieved or prevented by continuous small doses of morphine, for a long time. Musser has seen a form or stage of myocarditis with restlessness, Cheyne-Stokes breathing, dyspnoea and rapid pulse, helped by repeated and continued doses of opium in small amounts. The tachycardia of Graves' disease is relieved and, in three of his instances, it appeared to contribute to the cure of the disease. In the nervous and irritable subjects, opium is almost necessary to induce comfort.—(*American Jour. Med. Sciences*, January, 1905.)



## SURGERY

In charge of  
MAX BALLIN

**Excision of Thymus Gland for Asthma Thymicum.**—Cases of dyspnoea caused by hypertrophy, or tumor of the thymus, are very rarely diagnosed. Rehn and F. Koenig have each reported one case, where severe dyspnoea, in a child, was cured by a partial excision of the hypertrophied thymus. O. Ehrhard (Koenigberg) reports another case of the same character. A little girl, 2 years old, was suffering from dyspnoea for three months. Several spells of suffocation had occurred. Inspiration took place with loud stridor and with deep retractions in the region of the jugulum. Speech was hoarse. An enlargement of the thymus, or a mediastinal tumor could not be proved to be present. Intubation was first tried; the tube was easily inserted, but did not relieve the dyspnoea, hence it was clear that the obstruction of the trachea was lower down than the intubation canula reached. A median incision below the larynx, as for deep tracheotomy, revealed a very large thymus, the two apices of which could easily be seen above the sternum. The thymus was caught with forceps and under steady traction, was easily shelled out from the retro-sternal space. The wound was packed for a few days, in order to be able to do a tracheotomy if it should be needed. But the dyspnoea and suffocation never occurred again after operation. The wound was sutured five days after the operation and it could then be seen that the flattened trachea was returning to its normal shape. The total excision of the thymus was not followed in this case by any disturbances in the body. Especially was there no change in the number of blood cells.—(*Archiv fuer klinische Chirurgie*, Vol. 78, Part III.)

**Acute Post-operative Dilatation of the Stomach, with Report of a Case Following Nephropexy.**—Acute dilatation of the stomach, in its most severe type, is a rare condition and usually terminates fatally within a few days. As a post-operative complication of surgical conditions, it has received but scant mention in literature, and is frequently overlooked in the absence of a post-mortem examination. Halstead reports such a case after a nephropexy, in a girl 18 years old. The symptoms present after the operation were, nausea, frequent vomiting and slowly increasing distension of the stomach. On the fifth day, the abdomen was enormously distended and dull on percussion over its entire surface. The stomach tube was introduced and 2½ pints of

fluid were withdrawn. This gave only short relief. Temperature ranged between 99° and 101°. The pulse rate increased slowly, reaching the maximum of 140 on the sixth day. On the sixth day, the patient vomited about five pints of fluid at once, and died suddenly. Autopsy showed an enormously distended stomach, filling the whole cavity, the first portion of the duodenum also immensely dilated, all other intestines collapsed; wall of stomach attenuated, but normal in appearance; no obstruction of the pylorus; peritoneum everywhere smooth and glistening. This acute post-operative dilatation of the stomach has been observed after all kinds of operations, for instance, after amputations of leg, and breast, etc. Fatal termination is the usual event but there seem to exist minor degrees of dilatation that speedily recover. The pathology of the condition is not quite clear. Symptoms of this post-operative complication are very characteristic:—vomiting, gradual increase of the quantity of the fluid vomited, with symptoms of collapse, distention of the abdomen, with dulness on percussion, and the immense amount of fluid that can be evacuated by stomach-tube. The treatment consists in elevation of pelvis, employment of stomach-tube, also surgical interference; gastric fistula or gastro-enterostomy could be considered.—(*Surgery, Gynecology and Obstetrics*, Jan. 1906.)

**Acute Oedema of the Lungs Secondary to Ether Narcosis.**—Acute oedema of the lungs is one of the immediate sequelae of ether narcosis, which, while undoubtedly comparatively rare, must fully be reckoned with. Pedersen reports the following case: A man, 30 years old, underwent an operation for hemorrhoids. The anesthesia was introduced by nitrous oxide gas, followed by ether. Stage of excitement was very great, so that the anesthetic had to be pushed. The operation lasted about twenty minutes and about four ounces of ether were used. Immediately after the operation the man became very blue, the respiration became hesitating and a very rapid general oedema of the lungs developed. The pulse went up to 120. The treatment consisted of active dry-cupping over every part of the chest, elevation of the foot of the bed, injection of atropine, strychnine and whiskey. Nitro-glycerin (a twenty-fifth grain) seemed to be of the greatest value. The critical condition lasted about forty minutes, after which the patient improved slowly. The writer found fifteen other cases of this kind in the literature, nearly all of which were fatal.—(*Annals of Surgery*, January, 1906.)



## GYNECOLOGY AND OBSTETRICS

In Charge of

REUBEN PETERSON

**Leucoplasia of Vulva, Vagina and Uterus.**—Jayle and Bender have recently contributed a most valuable and interesting article upon this subject. Judging from the bibliography accompanying the article, very little attention has been given to the disease in countries outside of France. It is interesting to note, however, that Dr. Robert F. Weir, of New York, was the first to call attention to leucoplasia of the vulva. In 1875 he reported such a case in an article entitled, "Ichthyosis of the Tongue and Vulva."

According to the authors, leucoplasia is defined as an affection characterized clinically by the development of white areas, somewhat resembling the lesions of psoriasis, upon certain mucous or muco-cutaneous surfaces. Microscopically, the affection is distinguished by a marked thickening of the epithelial layers, associated with hypertrophy of the corneal layer, and a marked increase of round cells in the subjacent layers.

To 31 cases of vulvo-vaginal leucoplasia collected from the literature, the authors add two cases coming under their personal observation. It is interesting to note that over 50 per cent of these cases (17 out of 33), were complicated by carcinomatous degenerations. It was found, from a study of these cases, that leucoplasia of the vulva could be situated upon the labia minora, clitoris, or internal aspect of the labia majora, in fact, wherever the skin of the vulva approached the type of normal mucosa.

The characteristic lesions of leucoplasia are irregular, grayish yellow in color, oftentimes as white as silver or like pearl in appearance. The affected area is always adherent. Recent patches are transparent and give the appearance of having been touched with a pencil of nitrate of silver. Just as in leucoplasia of the buccal mucosa, the course of leucoplasia of the vulva is distinctly chronic; its progress is slow, but sure, only exceptionally are signs of improvement noted; cancerous degeneration of the leucoplastic areas was noted in more than 50% of these cases. The authors believe that while it cannot be stated that leucoplasia inevitably leads to epithelioma of the vulva, the lesions certainly predispose later on to epithelial changes. Leucoplastic areas in the vicinity of cancerous tissue show no characteristic changes. At first glance there are some points of similarity between leucoplasia and kraurosis. From their microscopic studies, Piderin and Pettit believe leucoplasia and kraurosis to be two distinct affections. Noto

and Perrin take opposite views and consider the two affections one and the same disease, any difference being due to the stage at which their observations are made. Jayle and Bender have observed kraurosis a number of years in a patient who presented no signs or symptoms of leucoplasia or cancer. They agree then with Szasz, Piderin and Pettit and would hesitate to conclude that kraurosis is a later stage of leucoplasia.

Leucoplasia has never been studied in its developmental stage, and its progress can only be judged by different observations made at intervals of several years. Intense itching and intolerable pruritus, oftentimes causing insomnia, are among the permanent symptoms. Pain is only experienced upon the advent of cancerous degeneration.

The prognosis of leucoplasia is grave, because so many of the cases end in cancer. At times the changes in the epithelioma are slow in the extreme, but more often the process is rapid, and soon causes death. All but two of these patients had passed the menopause at the time the leucoplastic changes were observed, hence it is evidently a disease of advanced life.

Syphilis does not seem to be a natural factor in the production of the disease. The same may be said of diabetes. Complete and thorough extirpation is the most rational treatment.

There have also been four recorded cases of leucoplasia of the vaginal mucous membrane. As a primary affection it is probably rare. Extensive observations upon the histologic characteristics of leucoplasia of the vagina are lacking, but there is every reason to believe that eventually other changes are the same as those noted in leucoplasia of the vulva.

True leucoplasia of the vaginal portion of the cervix is also a very rare disease, only five such cases being reported. The cervix may be ulcerated, and is the seat of the characteristic leucoplasia changes. Local treatment of the condition seems to avail little, as the affected areas tend to become malignant. Amputation of the cervix seems to be the operation of choice. Finally, strange as it may seem, leucoplasia of the cervical and corporeal endometrium has been noted in a number of undoubted cases. In order for this to occur, the normal cylindrical epithelium of the endometrium must first become changed to epithelium of the squamous type. That this substitution can occur, has been shown by Heitzman, Ziller and others. The diagnosis of leucoplasia of the endometrium can only be established by curettage or hysterectomy. (*Rev. de Gyn. et de Chir. Abdom.* Tome IJ., Nov. and Dec., 1905.)

## PATHOLOGY AND BACTERIOLOGY.

**Production of Active Immunity with the Split Products of the Colon Bacillus.**—It has long been known that animals treated with non-fatal doses of either living or dead colon germs acquired a certain degree of immunity to subsequent infections with this germ; and it follows that a certain portion of the germ must be responsible for this immunity. V. C. Vaughan, Jr., in his experiments, was able to separate a toxic portion and a residue which was non-toxic.

Daily injections of non-fatal doses of the toxic portion established a certain amount of tolerance up to twice the usual fatal dose, and also gave some active immunity to living colon germs. Thus, when an animal which has been treated with the toxic portion, later receives an injection of living germs which would prove fatal to a non-treated animal, the symptoms are the same as would occur with a non-fatal dose in an untreated animal.

With the non-toxic residue, however, the active immunity is much greater. This portion seems to be markedly bacteriolytic and very quickly breaks down the germ substance, liberating the toxic portion and producing the characteristic fall of temperature, etc., within an hour instead of within six or eight hours, as is usual with the control animal. Moreover, the control dies, while the treated animal recovers in a few hours. If the poison existed free in the culture medium, the control would show evidence of illness as soon as the treated animal, therefore we know that the poison must be intracellular and is liberated only when the germ substance is broken down.

Vaughan considers the immunizing group contained in the non-toxic residue to be of primary importance in the development of specific acquired immunity to this germ.—(*Jour. Med. Research*, November, 1905.)

**The Influence of Light in the Production of Cancer of the Skin.**—This by no means new subject is very thoroughly and ably handled by Hyde, the article evidently being inspired by the study of three cases of the very rare disease xeroderma pigmentosum. There are only about one hundred cases of this disease on record. Hyde, in describing the condition, says it might well be termed "childhood cancerosis." It occurs in young children about the age of two years, beginning as a cutaneous hyperemia, soon followed by a uniform discrete pigmentation of the exposed parts of the body with resulting symmetrical freckling of the skin in brown tinted macules. Then the skin becomes very rough, hyperemia and puffiness of eyelids ensue, whitish

spots become perceptible between the macules, small telangiectatic vessels appear, and finally warts, usually multiple and often very malignant, develop in the affected regions. Una and nearly everyone who has carefully studied these cases regard it as indisputable that all this is due to the weakened resistance of the skin of the young child to the more refrangible rays of the solar spectrum, the hyperemia and pigmentation being simply attempts to prevent the injurious action of the light. The irritating light first causes a hyperemia, then pigmentation, then atrophy, and finally cancerosis.

The pigmented parts are always more pronounced on the exposed portions of the body. Some occur on the covered parts, more being in the regions adjacent to the exposed parts than in the regions further away; they seem to shade off gradually.

Hyde then takes up the statistical side of cancer in general. Statistics show that there is more cancer in rural than in urban communities. He says that the agricultural farmer furnishes nine-tenths of the male cancer mortality, and that this is not due to exposure to inclement weather but to the action of sunlight. Toilers in the intensely cold countries do not suffer so from this disease; neither do those in the very hot countries as Arabia, Egypt, and Africa, where the pigmented skins of the natives act as an efficient protection. He has prepared a map of the United States showing by colors the geographical distribution of cancer, and draws some interesting conclusions.

#### Conclusions:

1. The skin of the human body in a certain proportion of individuals, and in these only, is hypersensitive to the action of the actinic rays of the spectrum.

2. This hypersensitiveness may be exhibited in the production of either hyperemia, pigmentation, telangiectasis, atrophy, hyperkeratosis or cancerosis of the skin, or by all, at times in a determined order of succession.

3. In the form of childhood cancerosis known as xeroderma pigmentosum, the pigmentation, telangiectasis, etc., etc., resulting from exposure to rays of light are exhibited early in life, instances of this disorder being extremely rare.

4. These changes occur in adults much more frequently than in children, reaction to the play of actinic rays of light upon the surface being chiefly determined after the middle period of life has been reached.

5. Physiologic pigmentation of the skin in the colored races seems to furnish relative immunity against cancerosis of that organ.

6. The colored races apparently suffer less than the whites from cancer of other organs. This relative immunity may be due to the protection from the actinic rays of light furnished by the pigmentation of the integument.—(*Am. Jour. Med. Sciences*, Jan., 1906.)



## PHARMACOLOGY AND THERAPEUTICS

**Plea for a More Simple Materia Medica.**—Mason believes that our materia medica is not only too bulky but that it is even harmful to the practitioner and student. It should be our aim to use active principles in every case where they fully represent the desired action, rather than a fluid extract or a powdered drug, for the reasons that it is necessary to learn but one dose, and that in this way we can always have a reliable medicant.

Several examples are given of tests made of crude drugs, which proved that they were practically worthless. Unless the physician sees to it that his prescriptions are filled at a certain pharmacy, with whose stock he is acquainted, he cannot, by any means, be sure that his patient is receiving the desired dose.

Furthermore, many pharmacists must buy their crude drugs powdered, and hence have no guarantee of their purity, for they have not the apparatus necessary to properly powder them.

The strength of galenicals may be changed from time to time, necessitating another study of dosage and also making mistakes not only possible but easy.

The variations in strength of the tinctures of aconite, gelsemine, colchicum, belladonna and nux vomica are cited.

The use of active principles teaches the physician to think of physiologic action and does away with much of the guess work in prescribing. If alkaloids are so reliable as to be used in case of last resort, to secure certainty and results, why not use them all the time, in preference to liquid preparations which have to be constantly watched to secure reliability?—*Jour. So. Carolina Med. Assoc.*, Jan., 1905.

**Treatment of Pulmonary Tuberculosis by a New Serum.**—Alexander Marmorek, in a communication to the Académie de médecine, reviews two years' experience (comprising 40,000 injections) in the clinical application of antituberculous serum, which he now claims to be an established method of treatment. In order to meet the indications in the third stage, that of ulceration of the lung, in which there is a mixed infection with both the streptococcus and the tubercle bacillus, it would appear to be necessary to use both the antistreptococcic serum and the tuberculin. It occurred to Marmorek to inoculate a horse with both microbes in order

to produce simultaneous immunization. The new serum or "double serum" obtained in this manner has, in fact, been used by him with success, especially in cases of hectic fever. The injections are claimed to be innocuous and the treatment to have, therefore, no contraindications. In the general discussion which followed the paper the claim of the antituberculous serum to be regarded as a specific treatment of pulmonary disease was not admitted; and the statement that the treatment was innocuous was denied. Experiments at the Hotel Dieu some years ago gave unfavorable results. Rabbits were inoculated with tuberculous sputum, and were treated with Marmorek's serum and the other half left untreated for comparison. The injections of serum were made personally by Marmorek. Every one of the rabbits thus treated died long before the control animals. In reply to these strictures, Marmorek claimed that the technique had formerly been at fault, but recently this had been improved. The testimony of a large number of experimenters proved that the injections as now conducted are harmless. Further experience will be required to definitely determine the real value of the treatment.—*New York Med. Jour.*, Jan. 27, 1906.

**The Therapeutic Value of Warm Moist Air in the Treatment of Diseases of Children.**—

Theron Wendell Kilmer advocates the use of warm moist air in the treatment of children suffering from croup, bronchitis, asthma, pneumonia, and diphtheria. The moist air may be introduced into the crib or bed of a child under an elevated sheet or blanket, by means of an ordinary croup kettle, or administered by inhalation. After outlining the diseases in which moist air is used as a therapeutic agent, he gives some conditions under which a hot dry air may be efficacious. A child suffering from nephritis is placed on a rubber sheet, the white one laid over it, and the covers elevated only sufficiently to admit the heat, which is applied by one of several methods suggested by the writer. He emphasizes its value in the treatment of all rheumatic affections, and has used it with success in sprains.—*Medical Record*, January 27, 1906.

For external application in pruritus:

℞ Acid Salicyl., dr. i.  
Sodii Biborat., dr. ii.  
Alcohol.  
Glycerine aa., oz. i.  
Aquae q. s., ad. oz. viii.  
Sig.: For external use.



# NEUROLOGY

In charge of  
C. W. HITCHCOCK

**Association of Epilepsy with Myopathic Condition.**—Onuf, of New York, reports some studies upon epilepsy which are more valuable as showing the very careful studies carried out at the Craig Colony, in an honest effort to throw any possible light upon the nature of this *terra incognita*, than as adding to our positive knowledge of the nature of this symptom-complex.

The effort was made to carefully select cases which might, so far as is possible, be regarded as idiopathic. Notes of the chief points in the histories of six cases are given, as are also memoranda of careful examinations. Photographs are printed showing muscular conditions present.

Summing up, he points out as common to the group partly muscular atrophies, partly defective muscular action manifested as:

1. Wing-like standing off of the scapulæ.
2. Atrophies of the scapular muscles.
3. Lordosis of the lumbar spine in erect position, disappearing in sitting position.
4. Pes valgus.
5. Involvement of the facial muscles (2 cases).
6. Electrical changes.
7. Fibrillary twitchings.

In view of his findings, he questions how many cases of epilepsy may, with any propriety, be considered as idiopathic.

He is inclined to class his cases among the genuine myopathies.—*Journ. of Nervous and Ment. Diseases*, January, 1906.

**The Etiology, Prognosis and Treatment of General Paresis.**—Collins assumes, at the outset, the recognition of the facts that general paresis is now much more common than has been thought; that it is most frequent in our cities; that its clinical delineation has undergone a striking change in 25 years; that, although syphilis is the most important factor in its production, alcohol, stress, and excesses of all sorts play no unimportant role.

The somatic signs may precede the mental by from two to five years and once the disease is developed no yet-known form of medication seems to affect its course.

Collins analyzes 100 cases, of which 85 were males and 15 females. In 23, there was neurotic history in the ancestors. Positive or probable evidence of syphilis was adduced in 65 cases. The author's experience would tend to disprove the theory that general paresis is never a manifestation of recent or very remote syphilis.

Nine cases gave history of preceding trauma, yet in some of these there had been syphilis too. Development of somatic symptoms, within six months after injury, is significantly looked upon as very suspicious of syphilis as the determining factor.

The subject of treatment is a large one, and cures are not now being as positively reported as was formerly the case. Opinion is coming to be more settled that the disease is practically an incurable one. Intensive mercurialization has been much used in France and some strong claims made as to results obtained. In three cases so treated, Collins reports improvement, while in seventeen other cases, similarly treated, no results whatsoever were secured.

Just as the general practitioner of experience may detect, in very early stages and by symptoms which commonly escape observation, the signs that tell of an incipient aortic stenosis, so here, he believes, the neurologist of experience may very early detect evidences which speak to him of a probable general paresis to follow.

Any stiffness of pupils, even slight evidences of facial or labial tremor, disordered reflexes, etc., may well deter a diagnosis of neurasthenia, arouse suspicion as to general paresis, and make advisable a reference of the case to a neurologist who will apply such psychologic tests of memory, apperception and mental coördination as may throw further light upon the case. Especially should particular attention be paid to possible defects in memory.

Prognosis depends largely upon how early diagnosis is established, the clinical type of the disease, and the age of the patient.

The less pronounced the symptoms and the longer the patient keeps to his occupation and so neglects his treatment, the more hopeless the case. Prognosis is regarded as most hopeless in the young.—*Medical Record*, January 27, 1906.

**Osmic Acid Injections.**—B. F. Eastman reviews the history of the use of osmic acid injections for neuralgia in the literature, and reports his own experience with the method. He has injected osmic acid for neuralgia nine times in seven patients, with more or less permanent relief in all but one, and with complete relief up to the time of reporting in several. The usual dose was ten drops of a 2 per cent. solution in each injection, sometimes also forcing a few additional drops into the perineural fatty tissues.—*Jour. A. M. A.*, Feb. 24, 1906.

## GENITO-URINARY SURGERY

In Charge of

W. A. SPITZLEY

**The Imperative Treatment of Urinary Retention.**—This condition, liable to be met with at any time by any practitioner, is often an emergency demanding immediate and intelligent care. It is necessary not only to relieve the patient of the pain and distress of a long, over-distended bladder, but frequently, if unwise or improper instrumentation has been indulged in, bleeding or beginning infection require urgent interference to save the patient from disastrous illness or even death. The possible causes of such retention are many; as a rule, however, physical obstruction in the urethra, resulting from traumatism, strictures, foreign bodies or extensive acute swellings produce the condition.

The diagnosis is usually easy; the history of inability to empty the bladder, together with increasing desire to do so, extending over a number of hours or even days; pain in the penis, bladder, back and lower part of the abdomen; tenderness, becoming greater with the development of a gradually enlarging tumor in the supra-pubic region; often a bleeding and swollen meatus; all these, especially when a chill followed by a temperature above normal has intervened, make plain a state of affairs requiring prompt action.

Some cases, if seen early, can be relieved by gentle and skillful catheterization; in most cases, however, coming into a hospital or into the hands of a consultant, instrumentation has already been indulged in to such an extent that it is unwise to inflict even the gentlest additional injury upon already injured tissues and other methods of relief must be sought. If a warm sitz bath, irrigation of the rectum with warm normal saline solution and irrigation of the urethra with warm boric acid solution have failed to cause the patient to pass urine, then with proper cleanliness, the bladder should be emptied by supra-pubic aspiration. After such relief, an opium suppository will assist in diminishing pain and in insuring much-needed rest. Aspiration may be repeated as often as necessary, the author in one case having continued it for twenty successive days with no unfavorable results. Hot poultices or applications to the perineum are valuable aids. Abstinence from urethral instrumentation is of the greatest importance; it often leads to the disappearance of the retention and always prepares the patient the better for the operation of urethrotomy, which must so often follow.

When the retention is associated with acute urethral infections, it is far wiser to employ supra-pubic aspiration than to force a catheter through a purulent urethra.

The author emphasizes aspiration for the following reasons:

1. Supra-pubic aspiration affords almost instantaneous relief in an exceedingly serious condition.

2. It is at times absolutely indicated. There is no alternative measure which can be substituted for it.

3. It is harmless when skillfully performed and is always available.

4. It can be carried out for days if necessary without danger and with little or no pain.

5. It is a valuable preparatory measure for the major operation.—(BISSELL, *Internat. Jour. of Surg.*, Dec. 1905.

**A Case of Hysterical Anuria.**—Garceau and Courtney report this case:

The patient, a young woman who had always been "nervous and high strung," had had a number of unfortunate occurrences in her life. At the age of fifteen, she suffered a great shock, having been assaulted at night; though her assailant failed in his purpose, she was thoroughly frightened. Then she had grippe, which disease was followed by a period of unconsciousness, lasting on and off for several weeks. At eighteen she was married, and for twelve years lived unhappily, under considerable mental stress. At twenty-seven she had her skull fractured, was ill for ten weeks, unconscious at intervals; at twenty-eight she had a moderate injury to the back of her neck as the result of a falling window sash. Since her last injury she has had these frequently recurring symptoms—retention of urine, oliguria and severe vomiting. When at her worst, she has complete anuria for two or three days, and nearly always has coincident vomiting; hematuria was present, after the injury to her neck, intermittently for a year. Several attacks of anuria have come on immediately following the shock of a physical injury, but some have occurred with no determinable exciting cause. Between the periods of complete anuria, the patient will for two or three months pass only a few ounces of urine daily. There has been one convulsion, not uremic but hysterical in character; there has been present also, on occasion, oedema of the face and of the extremities. In spite of her severe attack of vomiting and anuria, the patient recovers promptly and at once assumed an appearance of perfect health.

The authors believe this case to be one hysterical in nature, because the symptoms noted are all well recognized symptoms of hysteria, the most significant of which is her ability to rally and appear well at short notice; in addition, of course, it is to be borne in mind that careful examination of the urinary organs and analyses of the urine have shown practically no abnormality, and that possible lesions of the brain and spinal cord have been eliminated.

Cases of hysterical anuria, in which anuria exists as a more or less permanent symptom, unassociated with severe vomiting or purging, are extremely uncommon. In conjunction with vomiting, they are less rare; it is supposed that in those of the latter form, the excretion of many of the products of metabolism ordinarily found in the urine are vicariously disposed of by vomiting, by diarrhoea or by excessive perspiration. It is observed that when the secretion of urine becomes normal, as it frequently does without determinable cause, the vicarious phenomena disappear.—(*Am. Jour of Urology*, January, 1906.)



## LARYNGOLOGY

In charge of

J. E. GLEASON

**Papilloma of the Larynx in Children.**—J. P. Clark reviews the literature of papillomatous growths of the larynx and reports fourteen additional cases admitted to the Mass. General Hospital between 1873 and 1904. As a result of personal experience and a review of reported cases, the writer will in the future treat these conditions by tracheotomy and absolute non-interference with the papillomata until the period of active growth has passed. This decision is made for the following reasons: Papillomata will not yield to any form of treatment thus far attempted, however radical, until the period of active growth has passed. Clinical experience has shown that active growth is limited to the early years of life, cases of rapid recurrence after removal occurring exclusively in childhood, when cellular activity is at its highest. In a large majority of cases, attempts at removal during this period only increase the rapidity of recurrence. Children can safely wear tracheotomy tubes for any length of time, as the danger of resulting respiratory affections is not great. Tracheotomy should be practiced as advised by McKenzie, as soon as aphonia becomes permanent, without waiting for dyspnoea. McKenzie reports seven cases treated by this method, five of which were completely cured without further intervention, in from five to fifteen months. In case the papillomata do not spontaneously disappear, the age at which intra-laryngeal manipulation may with good results be instituted, varies in different cases, but should never be undertaken prior to the tenth year. Operation should always be intra-laryngeal.—*Boston Medical and Surgical Journal*, October 5, 1905.

**Zur Symptomatologie des Empyema Antri-Highmori.**—Hecht urges that general practitioners should bear in mind the remote local and general conditions which can depend upon empyema of the accessory sinuses of the nose. Very often they have occasion to see marked disturbances of digestion and nutrition and severe anæmic conditions which are consequent upon continued swallowing of decomposed sinus secretion. He illustrates by reporting the case of a woman 42 years old, who was taken ill with pain in the lower extremities, fever, malaise, and a sensation of burning in the hands and feet. On physical examination he diagnosed parametritis dextra, associated with multiple neuritis. The former yielded to the ordinary treatment, and

the fever subsided. The neuritis made no progress, the general weakness and inanition increasing. Attention was first called to the sinuses by difficulty in swallowing and by pain in the left ear due to a catarrhal inflammation of the eustachian tube. This led to the discovery of pus in the left middle meatus of the nose, with swelling of the middle and inferior turbinates, and sensitiveness on pressure over the external antral wall. Opening the antrum and thorough cleansing relieved the local symptoms and brought about a rapid improvement in the general condition of the patient.—*Munch. med. Woch.*, Vol. 52, No. 37.

**Zur Diagnose der Neubildungen der Kieferhöhle:** Chiari states that new growths of the antrum of Highmore, both benign and malignant, generally escape detection until they have either distended the cavity or broken through some part of its walls. Malignant growths as a rule are not diagnosed until the nose, throat, or face is involved. Localized pain, soon followed by a bloody, ill smelling, suppurative discharge, the result of early disintegration, are cardinal symptoms. Circumscribed ectasia of an antral wall with localized formation of granulation tissue, all of rather rapid development, as well as softening of the middle wall evidenced on probe puncture are important accessory signs. Severe localized pain is almost never lacking in the later stages and is often accompanied by fistulous openings and secondary glandular involvement. The large majority of benign tumors produce no symptoms. Simple cysts, multiple or single, are often the only evidences of past acute inflammatory processes. Dentigerous cysts, although not truly of antral origin, often encroach upon the antrum and cause bulging of its external wall. Polypi are found practically regularly in chronic inflammations, and produce little disturbance. The presence of angiomata is suspected when antral bleeding, with the absence of other signs of malignancy, occurs spontaneously, and is increased on syringing. An interesting case of this kind is reported. Osteomata, when of sufficient size to cause antral distention, often break down and offensive discharge results. Whenever a new growth of any kind is suspected, a large opening should be made through the canine fossa, allowing thorough examination and appropriate treatment. An early exploratory operation in all cases of suspected malignancy is urged.—*Deutsch. med. Woch.*, Sept. 23, 1905.



## RADIOGRAPHY AND ACTINOTHERAPY

In charge of

H. R. VARNEY

**Phototherapy at the Finsen Institute.**—For-  
dyce, in a recent visit at the Finsen Institute, was  
impressed by the gratifying results obtained in  
the treatment of lupus. He believes that the  
success of phototherapy at the Finsen Institute  
depends on the care exercised in its application,  
the experience of years in the management of  
such cases and the careful supervision of the  
patients so that relapses can be noted and treated.  
The intensity of the light obtained from the lamps  
in the Institute is probably also a potent factor in  
their results, as the light produced by many  
lamps made after the Finsen-Reyn model is too  
feeble to favorably influence lupus.

The time and expense required for the cure  
are also important considerations in the employ-  
ment of this method in our public dispensaries.  
If equally good results can be obtained by the  
Roentgen rays, which is strongly denied by those  
in charge of the Finsen Institute, it is far more  
convenient, less expensive and time consuming.  
Further experience, however, will be required to  
determine the relative merits of the two modes of  
treatment and the exact indications for each. It  
must be granted though that phototherapy as used  
in the Finsen Institute cures the majority of  
cases of lupus of the skin with less deformity than  
could be hoped for before the brilliant conception  
of its founder.—*Journal of Cutaneous Diseases.*

**X-Rays Should be Used by Physicians Only.**  
—An interesting discussion, in the French Acad-  
emy of Medicine, followed a paper by Debore,  
who strongly advocated that the X-ray should be  
used by physicians only. After the discussion, the  
Academy appointed a committee to study the  
question and, if necessary, provide for legislative  
measures to check the abuse of the rays in lay  
hands.

Debore states that it is unhappily true that  
some surgeons habitually turn over their work in  
radiography, both in hospital work and in private  
practice, to non-physicians. M. Debore was in  
doubt whether it would be advisable to interdict  
non-physicians from making radiographs, but he  
had no doubts whatever about forbidding them  
from practicing radiotherapy.

The folly of allowing non-physicians to prac-  
tice radiography is apparent for many reasons.  
First of all, in the interest of the profession at  
large, and because it endangers public security.  
The Congress of Radiology recently held at Ber-  
lin, regarded the question just as it should be.  
Because of the proven gravity of the effects of

the X-rays on the perpetuation of the race, and  
also because of its other admitted powers it  
should be forbidden for anyone, not a physician,  
to use it even for diagnostic purposes.

To make a radiograph is not to make simply  
a photograph. It is in 99 per cent. of cases to  
make a diagnosis, for all the value of an X-ray  
picture is in the interpretation. Above all, it is  
making a diagnosis by the aid of a very danger-  
ous agent. The X-rays are irritant and destruc-  
tive, and, as with all such substances, they should  
never be manipulated except by a trained physi-  
cian. *Bull. off. de la Soc. Francaise D'Elect. et  
de Radiologie.*

**The Treatment of Ring Worm of the Scalp  
by the Roentgen Ray.**—Fox, in a recent con-  
sideration of this subject, refers to the use of  
Roentgen therapy as a method which will  
revolutionize the treatment of ring worm.

The author reports uniformly successful results  
in all cases which have been treated in the Light  
Department of Westminster Hospital. By suit-  
able dosage and selection of the rays, which can now  
be regulated, depilation may be effected without  
serious damage to the scalp. The rays are con-  
centrated on the diseased areas, the unaffected  
areas being carefully protected. After an inter-  
val of a few weeks, the hair, which has fallen  
out, is replaced by a new, healthy growth.

The author considers the treatment economical  
as compared with others. It is rapid and pain-  
less. The danger of infection of others is rapidly  
removed. The only disadvantage is the period of  
baldness.

Fox is satisfied that this treatment will become  
the recognized one for this disease, wherever the  
ray is obtainable. Sabourand has now definitely  
established this form of treatment in the munici-  
pal ring worm schools of Paris.—*Pediatrics*, Aug-  
ust, 1905.

**Danger and Protection in X-Ray Work.**—  
Lehmann says that the best means of protec-  
tion is a gown of impermeable material. Com-  
plete suits have been made of material of dif-  
ferent degrees of safety, the heavier and  
bulkier the better, and sheet lead is the only  
safe thing. The apron of Roentgen-proof ma-  
teria reaches from the neck to the knees; the  
cap covered the face and head and was pro-  
vided with lead glasses. The gloves were also  
ray-proof, but neat enough to permit of  
handling screen and apparatus.—*Medical Rec-  
ord*, Feb. 3, 1906.

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## Original Articles

### SPORADIC CRETINISM, WITH A REPORT OF THREE CASES IN ONE FAMILY \*

HERMON H. SANDERSON, M. B.,  
Windsor, Canada.

Ever since the revelations of vivisection have established the relationship of "absence of the thyroid gland" to the cretinoid state, the subject has been one of absorbing interest. There is no more fascinating chapter in the history of medicine than that which deals with the researches leading up to this subject. It combined the efforts of the experimental physiologist, the pathologist, the physician and the surgeon, but to no one class alone does the credit belong for this great triumph of science.

While cases of cretinism are fortunately comparatively rare, the accounts of their improvement and cure under proper treatment read like a romance. In 1897, Osler was able to gather 60 cases and since then, through a more widespread knowledge of the disease, many more have been reported. In 1898, McPhedran was able to collect 17 cases in Ontario alone. Sporadic cretinism, as seen in this country, corresponds very closely to the endemic form of the disease seen in the mountainous regions of Switzerland, France, Italy and other countries, the main differences having

been ascribed to the earthy deposits in drinking water and conditions of the soil.

The disease is characterized by changes in the brain, bones, skin and mucous membranes, due to absence of or loss of function of the thyroid gland, causing failure of development and want of nutrition to the nervous system and a strange disproportion between different parts of the body. That these changes are readily recognized makes the diagnosis easy to those prepared to see. There are different degrees of cretinism, varying from the drooling, inane, semibestial creature to the higher grade cretin who is only marked by a slowness in thought and action and a general dulness of comprehension.

The disease may occur at different periods of life. The child may be born a cretin (a rare condition) or more commonly the disease is recognized after the child is six months old, when it begins to show a slowness of development; it lacks the mental brightness of children of its age and, if left untreated, the tongue seems too large for the mouth. The other form is that which supervenes after an acute illness with fever, such as one of the exanthemata. In this form, a

\*These patients were presented before the Wayne County Medical Society in October, 1904.

child apparently well in all of its functions, will be attacked with a fever and rash and then develop the well-known symptoms of cretinism. In typical cases, the child becomes listless and loses the desire to play or take interest in its surroundings. It begins to assume a squatness of figure and the face takes on an expression too old for its years. The nose is depressed between the eyes and the alae are thick and coarse, giving the nose a set back appearance; the eyes seem small, owing to the narrowing of the palpebral fissure, from puffiness of the lids; the ears are thick and heavily formed; the lips coarse and everted, with the tongue lolling from the mouth; the skin is coarse and thick and has a swollen appearance, being usually covered with a dry scale which is rough and harsh to the touch. There is lack of perspiration. There are supraclavicular pads of fat. The abdomen is prominent and gives the spine the appearance of a marked lordosis. The legs are short and the gait slow and waddling. The hands and feet are pudgy, the fingers short and the outline of the joints not well brought out.

If the disease has begun before the appearance of the second dentition, the teeth are ragged and dentition is delayed. The hair is thin and coarse and often comes out in patches. The mental development is equally backward. The child takes no interest in anything but its food, it has no desire to play but rather mopes about. It is slow of comprehension and speaks slowly, with a thick, coarse voice. Memory is deficient and parents will tell you that the child cannot learn at school. No one case will present all of these features nor can a sharp line be drawn between the different grades of cretinism.

While we are ignorant of the nature of the secretion of the thyroid gland and its functions in the human economy, there are certain definite symptoms which arise when the system is deprived of its secretion, and these symptoms correspond very closely to those of cretinism. Again, if the gland becomes atrophied from disease or injury, cretinism follows, the symptoms varying in intensity proportionate to the impairment in function of the gland.

The relation of goiter to cretinism has been carefully studied, but sporadic cretins are much more rarely the subject of goiter than those suffering from the endemic variety. This constitutes one of the main points of difference between the two varieties. Of the sixty cases in this country, reported by Osler, seven had goiter (12%), while of a series, reported by Knapp, of endemic cretinism (60% had goiter. Kocher,\* who has been a thorough student of cretinism, says: "The same influences which lead to goiter are a cause of cretinism. Whenever goiter or cretinism appears in children, one or other of the parents will be found to have goiter."

The more common condition in the sporadic variety is that of complete absence or atrophy of the gland. It is unfortunate that palpation affords so little evidence of the presence or absence of the gland. Cases are reported as not felt, in which the autopsy revealed a gland of considerable size. The pathologic findings of Coulon, Langhans, Hanan and Barker agree, in showing a general degenerative process, shown by the replacing of some of the alveoli of the gland by fibrous tissue and a degeneration of the remaining alveoli.

\**Boston Medical and Surgical Journal*, June 24, 1897.



The cases herewith presented are three sisters, Ida N., aged 21, Libby, aged 11, and Irene, aged 8 years. The parents are Canadians of Scotch and Irish descent. The father, aged 52, is 5 feet 8 inches in height, is perfectly well and has no history of goiter or any hereditary disease. The mother, aged 48, is 5 feet 5 inches in height and gives a history of

and becoming lame, it being necessary for her to go upstairs on hands and feet.

When I first saw her, her height was 4 feet, weight 102 pounds, girth of abdomen 35 inches, waist line immediately below breasts 27 inches, bust measure 32 inches, thigh 18 inches. She has not grown any during the last four years since stopping the treatment, though the



**Plate 1.** Fig. 1. Case one, Ida N., aged 21 years, before treatment.

Fig. 2. Ida N., after 4 months' treatment.

having had a thick neck, when young, and also an abscess in the neck.

#### Case One.

Ida N. (Plate 1, Fig. 1 and 2), aged 21 years, came under my care June 27, 1904. Some four years ago, she was treated with the thyroid extract by Dr. James Samson, for five weeks, but her parents stopped the treatment, because they thought that she was losing her memory

generative system has developed and she menstruated at 20 years. The permanent teeth have all developed, though the enamel is of a poor quality.

She presents the characteristic signs of cretinism: stunted growth, thick and flattened nose, puffy face and listless expression, pudgy hands and feet, absence of waist line and waddling gait. At the age of 5 years, she had a fever, with a rash, that the mother describes as water blis-

ters as large as the end of the finger. The blisters contained a yellowish serum. After this the child, who had been perfectly well before, became coarse, the hands and feet became stubby and the skin rough. She lost interest in things and steadily acquired the form that the photograph shows. She has been taking Thyroid Extract, grains 5, three times a

over the prospect of growing like other girls. Plate 1, Fig. 2, shows her appearance at this time.

#### Case Two.

Libbie N. (Plate 2, Fig. 1 and 2), aged 11 years, was brought to me by the mother, May 21, 1904, to have something done for the curvature of the spine, which



Plate 2. Fig. 1. Case two, Libbie N., aged 11 years, before treatment.  
Fig. 2. Libbie N., after 4 months' treatment.

day, and on September 25, after three months' treatment, has gained  $1\frac{1}{2}$  inches in height, has lost 21 pounds, and the measurements are now: Abdomen, 31 inches; waist, below breasts,  $26\frac{1}{2}$  inches; bust, 29 inches; thigh, 16 inches; height, 4 feet  $1\frac{1}{2}$  inches; weight, 81 pounds.

She now shows an interest in her clothes and wants to pick out a new hat and go out with the rest of the girls. Her gait is smarter and she is much elated

was very marked.

On examination, I found a very prominent abdomen, thighs inclining forward rather than backward, legs very much shortened so that the center of the body was nearer the umbilicus than the pubes. The skin was so harsh and dry that it seemed as if it had been rubbed over with bran. The features were very coarse, the hands thick and without form, and all, combined with the vacant expres-



sion and slowness of speech, went to make up the picture of a cretin. I was not able to feel the thyroid gland.

The measurements were: Abdomen,  $21\frac{1}{2}$  inches; height,  $39\frac{1}{2}$  inches; thigh, 16 inches; weight, 49 pounds.

She was put on treatment at once.

caused fever, vomiting and prostration. The abdomen had already lost  $3\frac{1}{2}$  inches in circumference. During the next two weeks the abdomen lessened another inch in circumference; the mother said that the child smiled most of the time and never cried as she did.

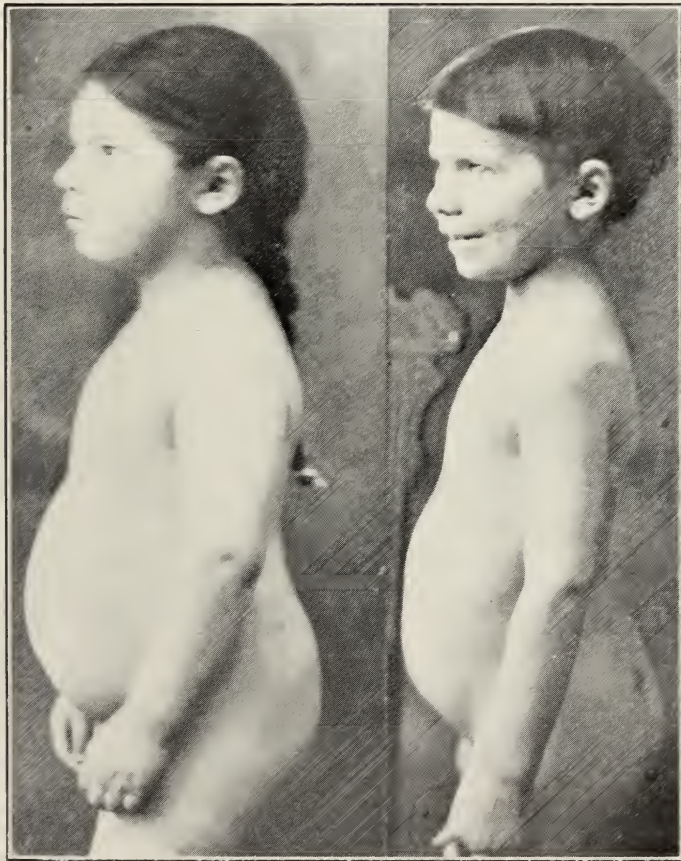


Plate 3. Figs. 1 and 2. Case two, Libbie N., before and after treatment.

Three weeks after, the mother noticed for the first time that the child perspired. She said the child's temper was better and that she wanted to dance, when her sisters played the piano, while before, she would always tell them to stop the noise. She was then taking  $2\frac{1}{2}$  grains, three times a day, and any increase in dose

Before she began treatment she would rock in a chair all day and the least cross word would make her cry. She never would come to the table unless she was brought, but now came of her own accord. She was then losing her temporary teeth, two central incisors having just come out. Her answers were ready, while before she



would not reply to a question except to merely say yes and no. On September 21, 1904, four months after taking treatment, her condition was as follows: Height, 41½ inches, a gain of two inches; weight, 43 pounds, a loss of six pounds;

tral incisors of the second dentition had appeared.

#### Case Three.

Irene N. Plate 4, Fig. 1 and 2), 8 years of age, came under supervision, June 22,

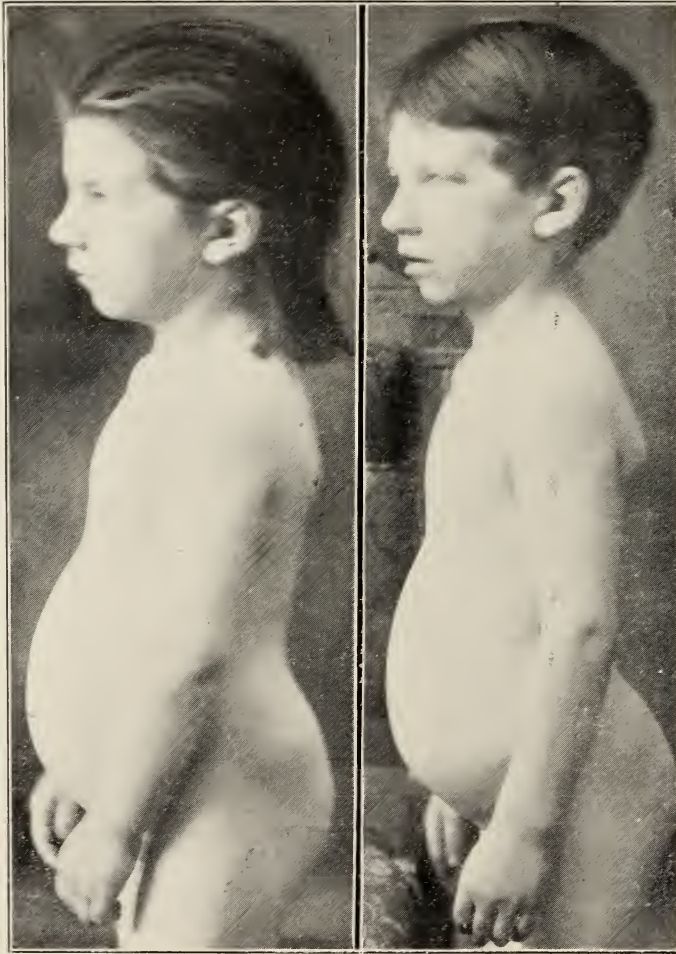


Plate 4. Fig. 1, case three, Irene N., aged 8 years, before treatment  
Fig. 2. Irene N., after 4 months' treatment.

the face was much thinner, the eyes brighter and the figure entirely changed. The changes in the skin and hair were remarkable. Her skin was then as soft as any child's skin. A new crop of hair had come in and it was much more abundant and of a finer texture. The two cen-

1904. Her height was then 39 inches; weight, 43 pounds; abdomen, 23 inches; thigh, 12 inches. The thyroid was not palpable.

The mother stated that until two months ago she had never noticed anything wrong with the child. She was

bright and seemed well. Then the hair fell out in streaks and it seemed as if it would come out altogether; there were some patches perfectly bald; a rash appeared first over the chest, then over all the body and limbs. It started in small blisters, then became large water blisters which broke and left a dry, scaly skin, which, as the mother said, made the child look like a "warty toad." The mother recognized the rash as the same that the

were very prominent. The teeth were decaying but none were loose. The nose was broad and flat at the bridge, forehead low, mouth kept open and expression listless. The hands and feet were stubby and she was slow in all her movements.

Since this case had not been of long standing none of the symptoms were as well marked as in the other sisters.

July 22, 1904. After taking treatment six weeks the patient weighs 39 pounds;



Plate 5. Foot of healthy child aged 11 years.

other two children had had, one of whom has had the rash several times. The mother now noticed the abdomen becoming large and that the child would "poke around" and be listless. Large blue veins showed on the body and the skin became dry and cold and the gait became stiff-legged.

An apparent lordosis was present, the thighs sloping backward, and buttocks

abdomen, 22 inches; the skin is peeling off in scales.

Sept. 21, 1904. After three months treatment, she now shows this condition: Height,  $40\frac{1}{4}$  inches, a gain of  $1\frac{1}{4}$  inches; abdomen, 22 inches, 1 inch loss; weight, 38 pounds, loss 5 pounds. The hands and feet are thinner and the outline of the joints can be made out. The skin and hair have improved and the temporary teeth are becoming loose.





Plate 6. Foot of Irene N., case three, aged 8 years.

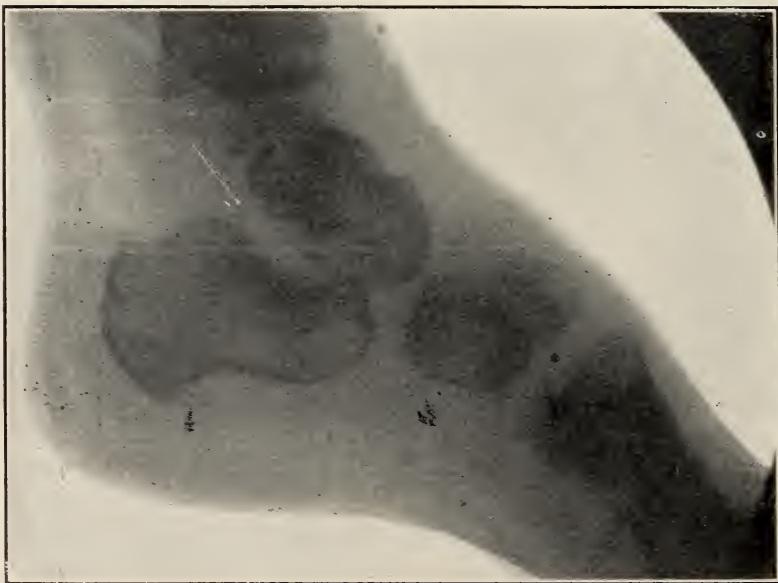


Plate 7. Foot of Libbie N., case two, aged 11 years.

The accompanying radiographs taken for me, through the courtesy of Dr. Preston M. Hickey, show very graphically the failure in development in the osseous system. In looking at the foot of a healthy boy of eleven years (Plate 5), it will be seen that the development is well advanced and that even the epiphysis for the posterior tuberosity of the os calcis, which appears at the tenth year, is quite advanced. Comparing it with the feet of cretins, at eight and eleven years,

the exact time the condition developed by the advancement of ossification, e. g.: in the child of eight years the center for the scaphoid, which normally appears in the fourth year, has just made its appearance, while in the eleven-year-old child the center for the scaphoid is not seen, although the centers for the external, middle and internal cuneiform bones are shown. Since the center for the middle cuneiform appears in the early part of the fourth year, we would infer that the



Plate 8. Hand of healthy child, aged 11 years.

the difference will be seen to be well marked. (Plate 6 and 7). It will also be seen that very little change has taken place in the bones from the eighth to the eleventh year; if anything, the foot of the eight-year-old child is further developed than that of the child aged eleven. This was possibly due to the fact that the disease appeared later in one than in the other, after which no osseous development took place. We can judge almost

disease overtook the child at the latter part of the fourth year. The study of the development of the carpus yields a similar inference.

Now, since the fever and rash described by the mother came on at a later period, it would seem that these symptoms came on after the disease had been established and was not, as the mother supposed, a causative factor. It is reasonable to suppose that the "fever" spoken of was one



of the common infections, perhaps one of the exanthemata, but so modified by the already diseased condition of the subject that it was not recognized.

When we consider the extraordinary influence of the excessive secretion of the thyroid gland over the different parts of the body, as portrayed in the condition known as hyperthyrea and the opposite condition, athyrea, or absence of secretion, we realize the very great importance

In the absence of accurate information regarding the character of the acute illness, we are unable to be positive as to its nature, and there are no apparent influences arising from the drinking water, the soil or the sanitary surroundings that would have any bearing on the condition.

When the pathology of cretinism was understood, it was not a great step to suggest a treatment and herein lies ample reward for all the research spent upon



Plate 9. Hand of Irene N., case three, aged 8 years.

of the thyroid function in the economy of the body.

The rapid pulse, moist skin, vasomotor instability and nervousness of the one, contrast markedly with the sluggish vascular system, dry skin and apathetic nature of the other. It would seem that a nice balance is maintained in the normal organism, which when disturbed one way or the other, gives the characteristic symptoms of each.

the subject. It is no simple achievement to redeem these unfortunate victims from hopeless idiocy, from objects of pity to those around them and an affliction to their parents, to a place of usefulness among their fellows, to transform them into rational, thinking beings from the low animal plane where nature doomed them to be. The results of treatment do not fall short of the marvelous.

It does not seem to make much differ-

ence in which form the thyroid substance is supplied to the system, for the results are the same. The most convenient way is by feeding the desiccated gland. The administration must be begun slowly until the system gets accustomed to it, as overdoses cause fever, rapid pulse, headache and depression. It is well to begin with one grain three times a day and gradually increase to five grains, three times a day, as it is borne. Within

and velvety, and the coarse dry hair is replaced by a new crop of thicker and finer hair. Dentition proceeds at once from the stage at which it has been arrested. The stature increases remarkably and is one of the most constant evidences of improvement. It seems as if a weight has been suddenly lifted off the unfortunate victim and he assumes a new attitude toward life, in his play and in everything around him. When all evidences of the



Plate 10. Hand of Libbie N., case two, aged 11 years.

a month or six weeks, improvement is noticed and the change steadily progresses. The weight is reduced, the child becomes more shapely, the face becomes thinner, puffiness disappears, and the eyes appear brighter. The prominent abdomen and supraclavicular pads become smaller. A marked change takes place in the skin, it loses its pallor and roughness, the scales fall off until it becomes soft

disease have disappeared, the treatment may be left off for a time and some patients remain well, while in others, symptoms of relapse show that the treatment must be carried on at intervals.

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## WHY NOT BE FRANK WITH THE PUBLIC?

E. H. FLYNN, M. D.,  
Marquette.

Much is being said nowadays concerning the relation of the public to the medical profession, and concerning the secret of power in Christian science and kindred delusions. There is one aspect of this question to which I have not seen reference. It long ago occurred to me that the medical profession had itself to blame, that the laity is attracted to these various forms of suggestive therapy, as something new and of mysterious power.

The profession has not been candid with the public. Doctors know that a vast deal of medical treatment which is asked of them, and which they give for a consideration, is needless; this applies not so much to the surgeon and diagnostician, as to the general practitioner. To him comes the host of the vaguely suffering, the people who do not know how to live, and resent instructions, the functionally disturbed, and the neurotics. Experience and tradition have led them to expect medication from the "medical man"; they get it; it fails, and they drift, perhaps bringing up at a Christian scientist's or a magnetic healer's. Persuaded by them to ignore sensations, their shackles fall off, and they discover that "they never needed medicine at all." Then one of three inferences is inevitable, either the doctors knew that the patients did not need drugs, in which case it was a fraud to prescribe and receive money from them, or they did not know it and were ignoramuses, or the special form of suggestion by which the patient has found relief is a great and precious discovery, a revelation outside the ken of a bigoted "medical profession."

Now, had the physicians been able to make out the character of these cases and been absolutely candid with the patients, had they refrained from medication, even by placebos, and frankly explained the nature of the trouble, and had they urged the patient to forget and look out and not in, at least the profession would not stand humiliated, as it does in the eyes of so many, at the present day.

In the face of the good they are doing, it is quite useless to call these various types of auto-suggestions "delusions," for a host of witnesses will rise up and say, "while once we were invalids when taking drugs, now we are well, since we rejected all medicines." To explain the benefit obtained, as suggestion, does not rescue us from the position of having for years needlessly dosed these patients,—neurotic, hypochondriac, hysterical, call them what you like, for all they really needed was to be taught self-forgetfulness.

Our profession has been wallowing in a slough of excessive drug giving these many years; a strange and seemingly instructive wisdom has actuated the popular rebellion against canonical therapeutics. Hahnemann led one form, "Homeopathy"; the public and the medical profession as well, learned not only that nauseous doses and indiscriminate bleeding and purging were needless, but even injurious, and perhaps homicidal, and also that many ailments subsided of themselves under the care of the little-pill men and their water-drops. That movement was a great revelation to us, but did not go far enough, and to-day



the Christian scientist is telling our public "that not even little pills and water are necessary, but that faith or prayer, or mental attitude suffices."

Hahnemann surprised the doctors as much as the laity. The results of Christian science do not surprise the physicians of to-day at all; they knew all about auto-suggestion before; indeed, the educated physician is prepared to go much farther than "Christian science," for if he spoke fully and candidly, he would say "you need neither drugs nor water drops, nor prayer, all you need is to disregard sensations, live right and forget yourselves." Why, then, does he not do so?

One reason and usually the first that would be advanced in justification, has been, "that unless we satisfy the patient's craving for medicine, even though not clearly indicated, he would seek advice elsewhere, and wander to some less discerning, or less conscientious rival." If reasons were made public, it might remind an unsympathetic laity of the ancient robber's plea, "that the traveler is sure to be fleeced farther on, and may as well give over first as last." Others say, in effect, that "the interest of the patient demands that he have a skilled physician; if dissatisfied with myself, the skilled physician (the major premise), he may pass to the care of the unskilled and unscrupulous; then if he fall really ill, he will suffer for his folly; better for his own sake, therefore, that I retain my hold upon him, so that I may be there to help him when he really needs aid." Probably few put the matter thus jesuitically, yet in one form or another, I fancy this argument affects many minds that would spurn the idea of doing wrong.

Most men state the case in this way: "We are not doing wrong; the patient

comes voluntarily into our hands; we cannot without giving offense be candid with him or her, especially her; for the one thing the public will not stand is candor about their ailments. We must take these cases at their own valuation, administer medicine or placebos as our judgment guides, and if we fail, we have done the best we could under the circumstances."

The point I am raising is, of course, *whether this plan is the best?* No one rejoices more keenly than the writer in the advances all along the line of our great calling; no one sees more clearly the public danger of extending systems of auto suggestion to ills, other than the vaguely nervous, or functional disorder, or agrees more heartily to the necessity of requiring all practitioners of healing, under whatever guise, to give proof of knowledge, lest faith cure be applied to diphtheria, for instance; yet the result obtained by systems of self persuasion, so ingeniously adapted to the needs of the weak-kneed and unstable, may well cause us to examine our own methods carefully. We should let no casuistry or veiled self-interest mislead us into virtual dishonesty, but we should meet the public candidly and openly. This is the best means of silencing invidious comment upon medicine, as it is practiced by a small number of the less honorable and skillful of our profession. The physician can have no better guide in professional life, or higher precepts than those which the much maligned code presents.

The profession is looked to as the conservator of medical morals. Its code of ethics is not more advantageous to the physician than to the public. In the majority of cases, it is the violator of the code, who violates the code of gentle-

manly and honorable conduct; its best provisions guard the patient, the family and the public. No more exalted rule is found, outside the teachings of the Great Physician, than its precepts afford.

Finally, the laity is interested in the

development and triumph of science. Each of us will find an abundant opportunity to influence public opinion in support of scientific medicine, preventive or curative, and in so doing to advance civilization and the interest of humanity.

## THE OPERATIVE TREATMENT OF RECENT CLOSED FRACTURES.\*

CARL S. OAKMAN, M. D.,

Detroit.

The art of surgery has seen greater progress in almost every other department than in that of fractures. The abdomen, cranium and thorax have experienced wonderful inroads and their emergency, plastic and regenerative surgery have all been placed on a recognized basis, even in the eyes of the laity. The surgeon operates to suture the ruptured liver, spleen, or kidney, the ruptured uterus, tube, or intestine, and his results are brilliant. But the broken bone is still treated in the dark, figuratively speaking. Many testimonials to the inadequacy of ordinary methods are visible daily in the shape of shortened thighs, crooked legs, stiff elbows, gunstock arms and other deformities. The uncertainty of results causes these injuries to be the bugbear of the physician and even the most experienced men have by no means uniform success.

Reflections of this nature prompted an investigation of the subject of operative treatment. It is, of course, not new. For over twenty years, Mr. W. Arbuthnot Lane, of London, has assiduously practised and expounded it. But the literature is scanty and old methods still predominate. French, English and Ameri-

can references are occasionally found, but German less often; and if we exclude the patella, the paucity is more striking. Bold as surgeons have been, their boldness for some reason has not endured in this field, except in occasional instances. What is the reason?

It is mostly fear of sepsis. It is argued that a broken bone will usually heal sooner or later, if assisted according to established customs. The spiral fracture of the tibia will ultimately mend and give the patient a leg to bear weight upon, even if it is short and perhaps a little *vagus* or *varus*. The anatomical and functional defects, following many fractures, are often far greater sources of pain, inconvenience, disability or mortification to the victim than a hernia, a retroverted uterus, or a varicocele, than a hypertrophied rectal valve, a cystic ovary, or an adenoid. Yet an operation for any one of these conditions may have as disastrous sequelae as a fracture operation. The fear of sepsis is valid, but it has not in the past deterred men from more serious surgery, not to say less advisable.

There are, it must be admitted, eminent

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\*Read before the Wayne County Medical Society, January 22, 1906.

authorities who urge conservatism. For example, Beck says: "While under the auspices of asepsis such treatment need not be followed by any reaction, and might in the hands of competent masters, give excellent results in suitable cases, such tendencies must be regarded as surgical aberrations. It is only where much diastasis is present, as in fracture of the patella and olecranon, when bony union appears improbable, that such rigorous interference is demanded." Again Stimson takes a similar stand, though in his last edition he gives more space to operative measures than in previous issues. Scudder is less opposed, and alludes to open fixation more favorably, as do Pilcher and Keyes. Lane, on the other hand, is radical in espousing operation. "I would insist that in every simple fracture in which it is important to the individual that the original form of his skeleton shall be retained and his mechanics suffer no alteration, the surgeon should, *failing to obtain accurate apposition, as determined by the radiograph*, cut down on the seat of fracture, and restore the bone or bones to their original form. He must not be satisfied with what is clinically called 'good position,' when by operation, he can obtain a perfect result, and in the case of the leg this is particularly important. \* \* \* \* \* I cannot help feeling that a clearer perception of the mechanical conditions which are present in fractures will influence surgeons very materially in favor of operative measures and that the treatment of fractures will be based on scientific principles and will soon cease to be a disgrace to surgery."

Golding-Bird is equally partisan in this view, and after years of practice these men are no less enthusiastic. Little by little the principle has extended until

there is hardly a fracture that has not had primary suture, nor a surgeon who has not tried it, while suture of the patella is almost a routine measure. This is not to say that primary open fixation is common, at least in this country, for it is not. The practice thus far has been mostly tentative.

One great factor in the slow development of bone surgery has been the tardy understanding of bone pathology. The tissue changes accompanying fractures were not well known until operations for compound and ununited fractures were frequently performed. It then became evident that it was far more common than supposed, for fascia, muscle, ligament, nerve, or blood vessel to be interposed between the fragments; that non-union and pseudarthrosis were usually due to such interposition; that "exuberant calus" sometimes meant faulty apposition; that nerves, vessels, and other structures were frequently injured or destroyed by these accidents; that extensive hemorrhage occurred oftener than suspected. These findings show that we do not know what condition may exist in any given fracture; they also show that these factors, which so seriously militate against good results, can be exactly diagnosed and accurately remedied by operation.

A further light upon fractures has been afforded by the Roentgen ray. No injury involving bone should be treated without a skiagraph, and no reposition should be trusted without the same test. This applies equally to operated cases.

A few years since, Scudder compiled the results, three to five years after injury, in a series of leg fractures treated conservatively; 60 to 81% showed poor results. What would be the comment on



an equal percentage of poor results in the non-operative treatment, for instance, of appendicitis? In conservative handling of fractures only one thing is certain—and that is the *uncertainty* of the outcome. Open treatment can do no worse.

To take up fractures in order. Everyone recognizes without question the necessity for operation in certain fractures of the cranium; when there are grave symptoms from hemorrhage, or depression of bone, one is in duty bound to operate. Fracture of the spine is regarded similarly, though results are discouraging and many men still advocate the expectant policy. It is, however, to other fractures that I wish particularly to draw attention. Few fractures have exercised the ingenuity of surgeons so much as that of the lower jaw. The variety of devices is legion, each having a limited success in the hands of its originator. But the direct fixation of the fragments has been comparatively little tried, being mostly regarded as a last resort when other means have failed. McCurdy, of New York, however, prefers it as a routine method of primary procedure, and reports good success. Carter, Vernet, Péraire and Mahé, have also advocated it and contributed to the literature. The method is simple and effective, but it would appear that it ought to be limited to selected cases that are not amenable to non-operative means.

Fractured upper jaws and malar bones are not often encountered, nor is there usually any active surgery practised for them. But they are quite sure to leave an altered physiognomy and this can be averted by a simple method. When the malar eminence is indented, the fragments can be raised through an external incision, or one in the mouth, at the

junction of the upper buccal and alveolar mucous membrane. This avoids a visible scar, but abscess has been known to occur. Lothrop, in a recent paper, describes a variation of the method and reports successful cases. He elevates the depressed portion of the malar, together with the superior maxilla, if affected, by instruments passed through a small opening in the mandible fossa. The antrum is packed, if found necessary in order to keep the position good. He has met with no sepsis and the results were very satisfactory. Precautions must be taken in advance to get the mouth clean, and after operation great care in the manner of administering food.

Fracture of the clavicle is fairly sure to unite—and likewise fairly sure to leave some deformity. But this is rarely visible nor does it cause functional inefficiency. If there is comminution, suture may be required, or if a fragment embarrasses the respiratory apparatus, the large vessels, or the brachial plexus, as in a case reported by DeRouville. Fractured clavicle is of itself such an unimportant injury that it will seldom need primary open fixation. Case reports are not wanting, to be sure, and in event of both clavicles being broken, Pluyette says suture is demanded if there is any dyspnea.

The sternum is very rarely broken. If there is depression of one or both portions, it may prove serious and when manipulation fails, operation should be done. The fragments can be directly pried into place or the bone may have to be trephined to get a proper purchase.

At the shoulder, we meet an injury which yields only to open treatment as a rule. There can be few but will appreciate the futility of treating a fracture of the neck of the humerus, associated with

dislocation of the head, by any other than operative means. Manipulation is seldom successful. Open incision, reduction of the head, bone suture if possible, or resection of the head if necessary, is the rational treatment. The hooks devised by McBurney are useful in the operation. If this injury is untreated, a practically useless shoulder results. But by operation perfect function is sometimes obtained and at least a useful arm. Fracture-dislocations of the shoulder should be referred to a surgeon as soon as the diagnosis is made. Besides the regular text-book references, articles have been written by Brigham, McBurney, Allison and Jones, Benjamin, and Curtis, with details of cases. Some of them are secondary operations, because the condition was not originally correctly diagnosed. These also gave brilliant results.

Uncomplicated fractures of the humeral shaft can usually be held in good position. But a certain proportion of oblique or comminuted fractures ought to have open fixation promptly, if good result is desired. It is in just such fractures of long bones that this treatment is neglected, and where it is capable of doing the greatest good. At the lower end of the humerus again we find a fracture that is prolific of bad results, i. e., the supra-condylar fracture, and also the separation of the epiphysis. It is difficult to keep proper position, and if it cannot be done, operation should be at once advised, with the assurance of much better chances for recovery. This stand has been taken by Santi, Gaudier, Lane, Shands and Roberts.

The olecranon occupies a position similar to the patella, both in its anatomical and functional relations and in its fracture-pathology. The fragments are likely

to separate widely, and bony union is uncertain, but in spite of this fact the elbow proves useful, in the majority of cases. Yet Beck, who calls open fixation a "surgical aberration," makes an exception of the olecranon. It is true that suture assures firm union and shortens convalescence, and is frequently practiced. The subject has been discussed by Pouly, Berger, Tancrazi, Coste, Abadie, and Moore, and all the text-books dignify it with more or less mention.

As for fractures of the fore-arm, open suture is seldom performed, except as a late measure, after delayed union or malunion. Occasional poor results of this kind suggest that conservative treatment is inefficient. It is the knowledge of fracture pathology that will enable one to choose such cases for early operation. If the skiagraph shows comminution or approximation of the two bones, or if there is serious impairment of the soft parts, the open method is indicated.

Coming now to the lower extremity, there are to consider, more fractures that indicate open fixation than in any other region. This is mostly due to the fact that bad results in the lower extremity produce great deformity and disability, and that it is harder to secure perfect apposition, as the muscles are powerful and the displacement in proportion. As Lane says, leg fractures materially diminish a man's earning capacity, especially among certain classes, and in these cases it is highly important to obtain a functional result as perfect as possible.

The open fixation of the neck of the femur has been done by many men, and written upon by Loretta, Ito and Asahara, Davis, Allison and Jones, Freeman, Painter and Koenig. The last named asserts that operation should not be delayed

beyond eight days, else it will prove very difficult. The usual retaining agent is the screw or nail. The adoption of this method is not likely soon to become universal, because any operation around the hip is difficult and not devoid of danger. Moreover the majority of these fractures occur in old people, on whom such an operation is of doubtful advisability. Nevertheless Lane declares that "in old people an operation is often more imperatively called for than in vigorous life, for the reason that prolonged recumbency in old age is a very serious matter, often entailing, of necessity, a fatal result. The shock sustained because of surgical intervention is trivial, and old people bear operations very well indeed." In children at any rate the operation may occasionally be advisable, because in their case, bad results become increasingly bad, causing coxa vara and shortening.

Fracture of the shaft of the femur is another fertile source of ugly deformity and altered gait. The tendency to shorten is hard to combat, the extension apparatus is tedious, and ambulatory treatment has not yet met with common approval. Delayed union or absolute failure of union is most frequently exemplified in the femur, and no other bone exacts such heavy penalty in months of waiting and discouragement. And when finally late operation is done, it is usually found that interposed tissues have been the obstacle. There ought to be no hesitancy in suturing these cases primarily, if there is any difficulty in maintaining apposition, or any comminution, or suspicion of soft tissues between the fragments, or other complication. If these indications were obeyed it is likely that a large portion of the fractured femurs would be operated, and that results would be greatly improv-

ed. Exactly the same remarks apply to the tibia, whose spiral fractures especially are very hard to treat by retentive means. Descriptions of operations and results in these cases have been given by Thiery, Bossuet, Guibal, Jopson, and Lane.

Fracture of the patella is one of the exceptions made by the opponents of open fixation. This seems to me a singular inconsistency, especially as they urge sepsis as a chief objection. If I were to choose from the whole skeleton a fracture in which sepsis were most undesirable it would be the patella. The luckiest outcome of a septic knee-joint is ankylosis, amputation is frequently necessary, and death has occurred. Moreover the conservative treatment is fairly efficient and useful legs commonly follow it. This merely emphasizes the remote possibility of infection and the confidence of modern surgery. It is of itself a strong argument for the wider extension of the principle. In 1898, Powers studied 711 operated cases and found 10 deaths, 3 of these from sepsis, i. e. 1.4%. This per cent would doubtless be bettered in a record of the last seven years.

The literature of fractured patella is extensive. In a recent number of the *Lancet*, Moullin reports 40 cases of his own treated by operation. Quinby reports the end results of 30 cases. Of unoperated fractures the outcome was perfect in 50% and poor in 33%. Of operated cases, the outcome was perfect in 65% and poor in 15%. The per cent of fair results was about the same in both. Although many men operate nearly all cases, certain authorities advise against indiscriminate interference. The prevailing opinions are well expressed by Scudder, saying: "Whether operation shall be done or not depends upon the degree of



safety with which it can be performed. It is the surest method of securing bony union. It should be undertaken only by surgeons of exceptional judgment and great skill, who have at command skilled assistants, and who can work under the most rigid aseptic conditions. The acute symptoms should be allowed to subside before operation. The operative treatment should be confined to healthy individuals under 60 years of age; to fractures with a distinct separation of the bony fragments and extensive lateral fascial tears; to cases presenting great joint distention that does not disappear quickly. It should be seriously considered, if the individual's occupation is arduous and necessitates much standing or walking. The patient should be informed as to the probable outcome by the two methods of treatment. The danger to life and limb should be fairly stated." Martin and Thomas state that the results of conservative treatment are in no way comparable to those obtained by operative means.

The foregoing is a list of fractures that have been subjected to operation. It is not complete, but it includes the most important. The others comprise isolated cases, done for complications so unusual as to be hardly more than curiosities.

It is evident that open fixation ensures good results in properly selected cases, but it would be extreme to recommend its use indiscriminately. In discussing the above special fractures, I have dwelt on the indications in each instance. Certain general indications may be deduced from these, and they are divisible into two classes—1st, those of convenience, and 2nd, those of necessity. By necessity, I mean that life is endangered by conservative methods. Under this head are in-

cluded fractures of the cranium or spine, producing grave symptoms of the central nervous system, and fracture of any bone which impinges upon large nerve trunks, important vessels, or vital organs. Among such are reported fracture of the rib, piercing the pericardium; of the pelvis, perforating the bladder; of the clavicle, rupturing the axillary vein or pressing on the brachial plexus; of the femur, rupturing the femoral artery. Such complications offer no choice of treatment. Other operations will be merely of convenience, i. e., the patient will live and not be seriously maimed by the adoption of ordinary means of treatment. Operation will be considered with the idea of either cosmetic, anatomical, or functional improvement. It will not be undertaken in aged subjects, or those suffering from disease which contra-indicates anesthesia or operative shock. Certain bone lesions would prevent suture, such as syphilitic osteitis, or osteomyelitis. If none of these conditions exist, the positive indications are as follows: (1) inability to hold the fragments reduced; (2) fractures near or implicating joints; (3) fractures which for any other reason threaten deformity or poor function; (4) comminution; (5) fractures of a limb upon whose integrity depends the livelihood of the patient.

Between the two classes of indications that I have mentioned—convenience and necessity—there will always be a wide divergence. Medical men agree, with much unanimity, upon imperative surgery, the abdominal emergency, the cerebral injury, grave hemorrhage—these are usually treated by active surgery. But operations that are not demanded as life-saving measures are not so uniformly approved. Yet this hesitancy, among both physicians and the laity, has been over-

come in so many instances that it seems as if it must be only a matter of time when fractures will be more extensively fixed by the open method.

The disadvantages of operative treatment are: (1) the danger of attending anesthesia; (2) risk of sepsis; (3) possibility of necrosis; (4) presence of a scar; (5) the possibility of not being able to hold the fragments after open treatment; (6) the necessity of removing metal appliances at a later date. As to anesthesia, it is customary in the conservative treatment of fractures and therefore cannot be reckoned as a risk greater in one method than in the other. As to sepsis, the risk is greatest in suture of the patella, yet that is the one instance most generally recognized. Sepsis cannot therefore consistently be urged against other bone fixations. The chances of necrosis are probably very slight, except with sepsis. It occasionally occurs when metallic, foreign bodies are left for a long time in the bone. As a matter of fact, they should not be allowed to remain after serving their purpose. The presence of a skin scar is a small factor in these days, and especially when it exists in inconspicuous places, where these scars usually are. The occasional failure of the various agents hitherto tried to hold fragments in place is an admission of weakness on the part of those who make the complaint; no failure has ever balked the abdominal surgeon; the worthlessness of one method of doing intestinal anastomosis has only stimulated effort to find a better, and not to condemn the principle. The poor technic and results of the early gastro-enterostomies have given rise to increased labor in perfecting better means. The failure of all methods of nephropexy in curing certain symptoms does not deter men from

still elaborating new methods. A few failures then in bone suture may be only because we do not as yet know how, and not because the principle is wrong. With larger experience the details will improve, making towards better results. Arbuthnot Lane's success attests the value of the principle.

The advantages in open fixation are plain: (1) Exact conditions of bone and soft parts are ascertained and remedied. (2) The need of repeated manipulation, which often happens in conservative treatment, is obviated. (3) Convalescence is hastened. (4) Non-union, mal-union, and pseud-arthritis are much less likely to occur, and the ultimate result is much more certain to be good.

A brief mention of technique and appliances will complete this subject. Of all the materials used in the open fixation of fractures, silver wire is the mainstay. By various ways of applying it, wire may be made to serve nearly all the other devices, or it may be used in conjunction with them. Nails, screws, pegs, pins, plates, ferrules, clamps and staples, made from different metals, bone, ivory and celluloid—all these are used, and associated with some of them are the names of their inventors. There are the staples of Jacoël, the Parkhill clamps, the Halsted plate, the Steinbach and the Agnew plates. The ideal way, of course, is to use absorbable suture material, and it can be made to serve in many cases, but more often it is insufficient in view of the great strain it is obliged to undergo. In nearly all recent fractures of the patella, catgut is the material of choice, applied according to the method of Blake or Stimson. Metal wire sooner or later usually causes trouble, and I have twice removed it from the patellae on account of suppuration,

though the operation was done years previously. Those who make a practice of employing non-absorbable appliances advise removal as soon as the bone is united and the wound firmly healed.

It hardly needs to be added that absolute asepsis is the keynote of success in these operations. Lane advises that not even a gloved finger be put in the wound; all the tissues should be handled with instruments and the longer the handles the better. Skin edges ought to be covered as soon as the incision is made. In short, he urges the extremest measures to at-

tain asepsis.

In conclusion, it is fair to assert that the open fixation of fractures has not been everywhere honored with a sufficient trial; that the advantages to be gained make it worthy of serious consideration; that there are certain well-defined indications for undertaking operation; that absorbable suture should be used whenever possible; that the long bones are especially amenable to open suture; and that physicians should advise its employment where there are indications as enumerated above.

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## DISCUSSION.

Dr. Max Ballin said that it once would have been considered a crime to make an open out of a closed fracture, on account of the great liability to sepsis due to the laceration and devitalization of the part. This liability is as great as ever and contraindicates operative interference with closed fractures except when accompanied by the more perfect asepsis of modern times. With the most perfect asepsis possible, however, certain closed fractures should be opened, as fracture-

dislocation of the head of the humerus, certain cases of fracture of the femoral neck, fractures of the patella. To illustrate the danger of septic operating in these cases, Dr. Ballin mentioned the results of three recent operations for fractured patella that had been brought to his attention: one amputation, one case as good as amputated, and the third case with a stiff knee.

Dr. W. H. Hutchins said that, unless contra-indicated, operation in closed fractures was made



advisable by any of the following factors: strong distracting muscle pull, as on the patella, olecranon, or os calcis; severe comminution; harmful pressure by bone fragments, as on nerves, or blood vessels; involvement of joints. Immediate operation should be performed on fractures of the spine, inferior maxilla, and patella. In about 25 operations for fractured patella, coming under his care, there was only one instance of considerable impairment of joint mobility. Uses non-chromicized kangaroo tendon.

Dr. H. O. Walker: A general anaesthetic should be the rule in introducing treatment of every fracture. In failure of apposition, operate. Massage very early; in some cases, immediately. Dr. Walker exhibited a long screw which he had used to hold in apposition the fragments of an oblique, otherwise unmanageable fracture of the lower part of the femur. Under ordinary treatment, this fracture had begun to unite with great deformity. The screw was left protruding, and later removed.

Dr. P. M. Hickey: Of many non-operative results of fracture, I have seen only one radiographically perfect. Radiography shows that manual diagnosis of the position of the broken ends is liable to great error.

Dr. T. A. McGraw: Results radiographically imperfect may be clinically satisfactory. The patella is readily accessible to instrumentation; op-

eration on this part, therefore, is less liable to septic contamination than operation on the middle or upper part of the femur, where manipulation and bruising of the tissues are unavoidably greater and more prolonged.

Dr. H. C. Wyman said that for 18 years he had been operating on fracture of the hip, without reason for regret. In treatment of fracture of the patella, it is important not to obstruct in any way the circulation of the part.

Dr. Oakman: The object of the paper was to point out the indications for operation in certain fracture cases. The knee joint, while credibly less liable to be infected in operation than less accessible regions, is a most dangerous place for sepsis. Theoretically, surgery can never be completely aseptic, and asepsis is a relative term; but preventable lapses from asepsis occur in surgery of the abdomen, without being recognized or without being recognized as such, because the abdomen, better than certain fractured bones or joints, can cope with, or conceal, slight infection. Strict insistence on approved modern means and unremitting watchfulness prevent these lapses, and produce practically asepsis. With asepsis of this order, immediate operation on certain closed fractures will save certain patients from prolonged convalescence, and from chronic pain, disability, and deformity.

## THE TREATMENT OF CHRONIC CONSTIPATION WITHOUT CATHARTICS \*

L. J. HIRSCHMAN, M. D.,

Detroit

Constipation may be defined as the voiding of insufficient amounts or abnormally prolonged retention of fecal material in the intestinal canal. Constipation, in contradistinction to obstipation, is due purely to functional conditions or diseases of some portion of the intestinal tract. Obstipation, on the other hand, is a condition in which there is a sufficient quantity of fecal material and a normal functional activity, but in which some deformity, growth, flexion, constrict-

ture or foreign body in the intestinal tract offers a mechanical obstruction to the passage of the fecal current. These two conditions are so frequently confounded in the mind of the average practitioner that the distinction must be always borne in mind, for the treatment of these conditions, while they may present similar symptoms, is entirely different.

Constipation is really but a relative

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condition. One individual may have two or three passages daily and still be constipated, while another individual may have but one passage a week and not be constipated.

Constipation in itself is not a disease but merely a symptom of a great many diseased conditions. It is not my intention to-night to take up the treatment of acute constipation or the treatment of either acute or chronic obstipation, as the subject is too large to cover in a short paper. In fact, the treatment of chronic constipation alone can scarcely be satisfactorily touched upon in a twenty-minute paper.

Obstipation is caused by such mechanical conditions as malformations of the intestinal canal; stricture; adhesions; pressure from the pregnant uterus and the various abdominal tumors; angulation; enteroptosis; appendicitis; cecal ptosis; stenosis of the ileo-cecal valve; fecal impactions; foreign bodies; hypertrophied rectal valves; prolapsus; large hemorrhoids; large prostate and hypertrophied sphincters.

Chronic constipation is a condition which affects a large proportion of all the patients treated by every practitioner of medicine. It is a condition which affects a great many practitioners themselves. It is a condition which is brought about by our modern, so-called strenuous, life. We find it in the infant and in the nonengravian. It is due to a great many factors, and in order that you may understand it more fully, I will digress a moment and review a few points in the physiology of peristalsis and defecation. One may say that up to the last moment at which the fecal mass is expelled from the anus, the ingested materials are carried through the intestinal tract by what is known as

peristaltic action. After the food has entered the stomach and the albuminoids converted into peptones, it passes through the pylorus into the small intestine. As the stomach contents pass through the pylorus they are acid. The secretions in the small bowel, the bile and the pancreatic juice being alkaline; when the acid stomach contents are poured into the small intestine, coming in contact with the alkaline intestinal secretions, a stimulation or irritation is caused, which produces a wave of muscular contraction or peristalsis. At the same time that the chemical reaction of the acid stomach contents upon the alkaline contents of the intestine is going on, certain gases are created. These gases serve to distend the calibre of the gut and by their distension still further stimulate muscular contraction. These gases are not abnormal but serve a most useful purpose. It is when they are in too great quantities and too severe peristalsis and consequent great distension of the intestinal canal ensue that they are harmful; they then cause atony or paralysis of the circular fibers and loss of tone. These gases are largely reabsorbed by the blood vessels or discharged with the feces. If these gases, in their downward passage, meet any obstruction, they are forced backward into the stomach and are discharged in this direction.

Another important source of stimulation to the coats of the bowel is the harsh indigestible particles of food which are not acted upon by the gastric juices. These also irritate and stimulate the contractions of the circular muscular fibres in the small intestine.

Of no small importance is the stimulus caused by a to and fro movement imparted to the bowel by respiration. The

excursions of the diaphragm upward and downward impart to the small bowel in particular, and also to the transverse colon, a movement which stirs up and churns, as it were, the intestinal contents. It changes the position of the bowel and helps to keep the intestinal contents on the move. It can be easily seen how anything which restricts the full expansion of the chest will interfere with the intestinal functions and assist in causing constipation.

The intestinal contents are fluid until they reach the ileo-cecal valve and by this time they are practically digested and nothing is left but those elements which have no food value. After they pass through the ileo-cecal valve into the cecum they become less fluid and, having to travel against the force of gravity, their movement in the large bowel is checked. Staying as it does in this portion of the bowel for some time, the fluid parts are gradually absorbed, and the nearer to the sigmoid the feces, the more solid they become. The mucous membrane of the colon is thicker and not so sensitive as that of the small bowel and requires more stimulation, consequently the stools are more solid in this portion of the bowel. If, however, too much vegetable fibre and undigested material is ingested, the colon tends to become over-stimulated and atonic; the fecal mass moves very slowly and the colon becomes over-distended and atonic, and chronic constipation, and sometimes fecal impaction, result. The fecal material, when it reaches the sigmoid, rests until ready to be passed out through the rectum and anus, as a fecal movement.

It can readily be seen that anything which interferes with the proper development and exercise of the intestinal muscle

layers will interfere with the proper movement of the intestinal contents and with expulsion at the proper time. In the first place, enough fluid must be taken into the system daily to keep the intestinal contents in solution and to properly supply the various organs of the body. People who do not drink sufficient water suffer from constipation because of the reabsorption from the intestinal tract and consequent hard and dry stools. People who drink great quantities of water with their meals drown their gastric juice; undigested particles of food are sent through the pylorus with great gushes of greatly diluted gastric juice; the feeble acid reaction of this mixture does not cause the proper reaction with the alkaline intestinal contents; proper amount of gases is not evolved and intensely irritating food particles are passed down the small bowel. This is another cause of loss of tone.

It is a well-known fact that carnivorous animals are constipated, while the herbivorous animals have full and frequent bowel movements. It therefore behooves us to see that a sufficient quantity of vegetable material which will leave undigested fibre in sufficient and not too great quantity, is incorporated into our daily regimen. It should also contain a sufficient quantity of mineral salts, which are natural laxatives. It should contain sweets, within certain limits, because of the gas development which goes with them and the fact that carbon dioxide gas is one of our best laxatives. Above all, it must not be a concentrated food; it must give sufficient bulk to the stool so that it will properly fill and distend the gut, give it work to do, and produce the proper mechanical stimulus to contraction. The value of whole wheat bread



lies in the quantity of cellulose in the husk, which is a very important element. People who eat too fast, causing improper digestion with improper bowel contents, have improper stimuli to peristalsis and consequently improper stools.

Outside of dietetic error, the most important cause of constipation is neglect. The school child hears the call of nature, the fecal mass is ready to be extruded, he is receiving powerful stimuli for the dilatation of the external sphincter, but in our modern schools the lesson hour is more important than the functions of nature. The child is not allowed to go and relieve himself. He restrains nature's efforts; the desire passes away. The continuance of this performance day after day soon makes the child a constipated child. For, while peristalsis is involuntary, in the vast majority of people the voluntary control over the sphincter is normally sufficient to withstand peristalsis. The strong expulsive efforts soon tire when retarded by a tightly contracted sphincter, and soon a constipated habit is induced. The young girl in society is taken with a desire to move her bowels and either because the time is not convenient and she restrains nature's effort, the desire soon passes away and she is constipated; or she may be willing to satisfy nature's desire but in order to reach the toilet room she must pass perhaps through a crowded room, and false modesty prevents her from allowing her friends to see her go in the direction of a toilet room. It seems to me that a very important provision in architecture of homes and institutions should be the placing of the toilet room in such an inconspicuous place that a person may reach the same without being subjected to the gaze of others. The business man,

the traveling man, the physician, the school teacher, the professional man, all refuse to obey nature's call because the time is not convenient, and thus we have a constipated nation, because we have not time to move our bowels when they want to be moved. I think this is the most important cause of constipation.

Another contributing cause to the voluntary repression of defecation is the fact that in institutions, and in large buildings, there are not enough toilet rooms for the number of inmates. Where one has to wait for his turn, as it were, the desire is soon lost.

The shape of the closet seat and its height from the floor are all of importance in the production of a good stool. The seat should be so made that the person using it is in a squatting position with the buttocks well separated so that free excursion upward and downward of the pelvic floor is allowed, and the full action of all the muscles involved in defecation brought into play. People leading sedentary lives who do not get sufficient exercise, of course, are constipated, as exercise is one of the important factors in keeping all bodily functions normal. There are many other causes which contribute to the production of constipation, but those mentioned are the most important.

When the bowel has become atonic, then remedies to restore their tone must be employed. In the treatment of acute constipation, cathartic drugs, suppositories, enemata, all have their proper place; but the victim of chronic constipation should no more be made a drug fiend than the victim of chronic appendicitis. Instead of causing irregular, erratic and violent peristaltic movements at certain times during the day, and in-

stead of changing from one cathartic to another and increasing the dosage, instead of taking away the work of the bowel by flushing with enemata; we should strive to bring that bowel back to its normal tone by imitating nature's methods. The only place for a cathartic in the treatment of chronic constipation is at the beginning of the treatment. When a patient consults you, complaining of infrequent or insufficient bowel movements, the first thing to do is to make a diagnosis between constipation and obstipation. The patient should be examined carefully, his abdomen should be palpated thoroughly; your female patient should have a bimanual examination; the male patient should have the genito-urinary organs examined, as many causes of constipation are reflexes from bladder and prostatic conditions. The rectum and sigmoid should be thoroughly explored and a complete proctoscopic examination is imperative in every patient complaining of impeded fecal movements. After you have satisfied yourself that you have a case of constipation, and not obstipation, to deal with, and after carefully questioning your patient as to habits, diet and previous history, the question of treatment presents itself.

Dietetic errors should be corrected and the patient instructed as to the time and the quantity and the kinds of food to take. If he is not able to properly masticate his food, he should consult his dentist. The teeth should be put into perfect shape. He should be instructed to drink from six to eight glasses of water in every twenty-four hours, the first glass on rising, the last glass upon retiring. He should drink between meals but not with meals. He should be instructed to eat a sufficient quantity of vegetable foods and

to eat the outside coverings of such fruits as pears, apples and peaches. He should be instructed to take outdoor exercise, to play tennis, to play golf, to go ~~back~~ riding, or bicycle riding, or to take long walks. He should take breathing exercises, and should develop his abdominal muscles. Any local condition such as hemorrhoids, which of themselves do not cause constipation but are caused by constipation, and by their presence prevent natural movements, should be corrected. Fissures, ulcers, or excoriations of the anus should be treated locally. Proctitis should be relieved by the proper sprays and medications applied locally. Run down patients should receive massage from a properly qualified masseur. The abnormally tight sphincter should be dilated or given vibratory massage, and the atonic lower bowel should be properly massaged.

The author has been using a method of internal massage and dilation of the sphincter which is very simple and which has been most successful in his hands. The principle is not new. It consists in the introduction into the rectum and sigmoid of sausage shaped pneumatic rubber dilators. These are dilated to conform to the shape of the rectum or sigmoid, by means of low compressed air pressure. This dilatation is carried to a point where the patient feels a fullness and the dilator is alternately inflated and deflated and manipulated so that the mucous lining of the bowel is stimulated and the circular muscular fibres contract and gradually regain their tone. Cases of chronic constipation of years' standing have been successfully treated and cured in from one week to two months' treatment, the longest case not requiring over twenty-five treatments to establish a perfect cure.

Normal defecation usually follows within a few hours after the first treatment.

These pneumatic dilators the author has made from a rubber bag shaped like a condom and they are mounted on a Wales bougie, sizes 5 to 7. These are attached by means of a cut-off valve, to the compressed air apparatus, at a low pressure, and are slowly expanded and allowed to empty themselves. These treatments do not last over five minutes at a time and are followed by good expulsive efforts.

The patient is allowed and encouraged to go about his work and is not obliged to carry any extraneous substance, such as cotton wool or gauze, around in his rectum or sigmoid for from one to six hours, with tapes, tags or strings protruding from the anus. He has received sufficient stimulation, applied directly to the rectum or sigmoid or to both, in a few minutes, and with decided happy and permanent results.

The simple pneumatic dilator devised by the writer, being mounted on a firm but flexible shaft, is introduced into the rectum with the patient in the Sims' position, and without the need of the speculum or proctoscope.

In simple enlargement of the rectal valves, due to proctitis and congestion, where there is no deposition of fibrous tissue, pneumatic massage with this dilator will speedily effect a correction of the condition.

In unusually resistant sphincters,

gentle dilatation with this instrument, along with digital massage and kneading of the external sphincter muscles, quickly corrects the condition.

The only medicinal agents prescribed, and these only in occasional cases, are strychnia, before meals, as a tonic and pancreatin in five or ten grain doses, after meals, to correct intestinal indigestion, when present at the onset of treatment. The only time when the administration of a laxative or enema is permissible, in the treatment of chronic constipation, is to empty the bowel of its hardened contents at the beginning of the treatment, and only then!

When, after studying your patient, his habits and history, and after a proper proctologic examination, you have made a diagnosis of chronic constipation in contradistinction to obstipation, then you may be certain that you have a case which will respond favorably to the treatment I have outlined. The important point which I wish to impress particularly on you, in closing, is to first make your diagnosis between the obstructive condition from the mechanical causes enumerated above, obstipation; and the purely functional diseased state known as constipation. .

In conclusion, the writer wishes to state, that he has yet to meet a case of true chronic constipation, in which he has had the co-operation of the patient, which has resulted in failure.





## HEALTH OFFICERS, THEIR DUTIES AND RESPONSIBILITIES IN CONTAGIOUS DISEASES.\*

F. W. SHUMWAY, M. D.

It is a fact, and I think one that is recognized by the profession generally, that the health laws on our statute books today need a general revision. They are, in many instances, too liberal in construction and not specific enough in details, complicating to a great extent the working of the law, as, for instance, allowing one class of men to pass upon accounts contracted by other men or bodies of men, as boards of supervisors auditing accounts contracted by local boards of health; again, allowing local boards of health to carry out restrictive measures, under such rules and regulations, as they, themselves may adopt. Then, again, while the courts have been very liberal in their interpretation of the law, recognizing as they do that health boards are, in a sense, emergency boards, organized to meet and combat emergency conditions, for the protection of the public, and while the law names only three diseases as especially dangerous to public health, smallpox, diphtheria and scarlet fever, and concludes with "such other communicable diseases as are dangerous to public health," etc., the law, in this particular, is not specific enough, for under it the State Board of Health has assumed the right to say what these other diseases are, and as a result, we have a list of ten or more diseases classified as dangerous to public health, all of which I know do not appeal to the profession, at large, as being especially dangerous.

The law specifies smallpox, but we all know that the mortality rate is many times greater in consumption, pneumonia,

typhoid fever, and in fact, in all of the other communicable diseases, than in smallpox.

So, I say, our health laws today, as they stand on the statute books, are inadequate for present conditions, and should be re-enacted, and in my judgment, the power to determine what diseases are especially dangerous to public health, should be vested in a board or commission of the best medical men of the state, who are in active practice, and able to pass intelligently on this question. Were this done, the State Board of Health, the local boards of health, and the physicians at large, could work more in harmony, and better results could be obtained.

Understand, I am not saying these things in a spirit of criticism, for our present law is far and away ahead of no law, and great good has resulted from it, but as a general practitioner for twenty-four years, twelve or thirteen of which, I was a local health officer, then coming into my present work, I believe I appreciate the defects in our present system more than the average physician, and the reason there has not existed more cordial relations and co-operation in our work.

The work of sanitation, as carried on by the health officials, is distinct from that of the physician, but none the less important. The physician combats disease after it has attacked the system, the sanitarian or health officer combats

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\*An address delivered before the Ingham County Medical Society, January 11, 1906.

causes and conditions which produce disease. It is a distinct school, that of preventative medicine, but it cannot be successfully carried out without the co-operation of the active practitioner.

Recognizing, as we must, that in the list of contagious diseases dangerous to public health, some are much more so than others, requiring more detailed work on the part of the health officer, yet in all cases of a contagious character, the duties and responsibilities of the local health officer are great, for upon him devolves the task of inaugurating and carrying out proper restrictive measures, to the end that the public may be protected. But his work can avail but little, without the active and intelligent coöperation of the profession at large. And I want to say right here, ladies and gentlemen, that we as medical men and women, in active practice, are under obligations to the public along these lines. In a measure, I can understand why this is so, and as a profession why we have not taken the interest in these matters that we should, and it is to discuss them, and if possible bring about more concerted action between the health department and the profession to the end that public health matters may be better subserved, that I speak of these things.

Now, I am not going to quote law to you, for I assume you are all familiar with its provisions. In justice to the local health officer, upon whose thoroughness in the performance of his duties, largely rests the success of restricting these diseases, as well as in justice to our own patients and the public at large, when we are called to a patient, suffering from some contagious trouble, we should report the same to the health officer as soon as a positive diagnosis is established, and

not wait until the patient is dead or has recovered. By so doing, the health officer can inaugurate measures that will be of some value, whereas, if we wait a day or two, or even longer, valuable time is wasted and we fail of results.

I speak of this phase of our duty, at this time, not in criticism, for as a general thing, I believe the physicians, in Lansing and vicinity, are pretty good at reporting cases; but I know throughout the State, many instances, where the first knowledge a health officer has of a dangerous disease occurring in his jurisdiction, is when a death is reported to the Vital Statistics Department and we write the health officer for final report on the same, possibly a month or longer after death, precluding any effective action on his part, toward restricting the same, and unless the attending physician has disinfected, the public is little, if any, protected.

To return to my subject—Assuming that the physician has done his duty and reported a case dangerous to the public health, it then becomes the duty of the health officer to immediately investigate the case, and institute such measures toward restricting and preventing the spread of the disease, as the case demands. And right here you will pardon me if I digress a little and state my position on the subject of precautionary measures to be taken, for I recognize I am in some respects going against long established rules and regulations, as laid down by the department with which I am now connected.

It has been the policy, in times past, to list certain diseases as dangerous to public health, and outline restrictive measures, such as isolation, disinfection, placarding, quarantine, etc., to apply to all.

With this policy, I take issue as being impracticable, inconsistent and not appealing to the profession as necessary in all cases and, therefore they are not carried out. For instance, we have as these diseases, smallpox, diphtheria, scarlet fever, pneumonia, typhoid fever, consumption, measles, whooping-cough, influenza (la grippe) and meningitis, and as these diseases differ in the degree to which they are dangerous to the public health, so in my judgment should the means employed to restrict them, differ in like degree.

In smallpox, diphtheria and scarlet fever, all the known restrictive measures should be employed. Placarding, isolation, disinfection, quarantine, etc., together with vaccination in cases of smallpox, use of antitoxin in diphtheria, and if the epidemic be severe, a closing of schools, churches and public halls. In pneumonia, typhoid fever, meningitis and consumption, where the infection is limited to the discharges, if the patient and attendants can be isolated from the rest of the family and kept so, all of the discharges thoroughly disinfected before being disposed of, and complete disinfection of the room or rooms, in which the patient is confined, with all their contents, at the termination of the disease, then and in that case I do not consider it necessary to quarantine the entire premises, nor keep the children out of school. As to placarding in these cases in order to give the public notice, I would leave that to the discretion of the local health authorities, for a great many object to placards in these cases, and it can best be handled by the local health officer and attending physician.

In measles, whooping-cough, influenza, rotheln, chicken-pox, etc., isolation and disinfection, if properly carried out, are

about all that can reasonably be advised; to placard and quarantine would, in many instances, take in the entire community. Physicians in general do not consider diseases in this class of sufficient importance to even report them, to say nothing of observing necessary precautions, and I have found it useless to advise, unless the course suggested appeals to them. I do believe, however, with a proper classification of these diseases dangerous to public health, and of the measures to be adopted for restricting them, the profession will coöperate more fully with the health authorities, and better results will be obtained along these lines.

The health officer should, at all times, be prompt in action, as even a few hours' delay may result in general exposure, thorough in detail, and active in seeing that the proper restrictive measures are carried out.

Warning the public by placards or otherwise, isolating the patient infected, quarantining those who have been exposed during the period of incubation, urging (and I wish he might be able to insist) on vaccination in smallpox, of all, whether exposed or not, as vaccination and revaccination are the only measures which will stamp out smallpox.

The health officer should also notify principals and teachers of schools, of families where contagious disease exists. He must see that persons under quarantine do not suffer from lack of nurses, food or other necessities. He must supervise funerals of persons dead from contagious diseases, and disinfect or supervise the disinfection of rooms or premises, clothing and all articles likely to be infected, before allowing general use of them. He must, at all times, keep the president of his local board, and the secretary of the



State Board, constantly informed respecting the outbreak of every disease dangerous to the public health, occurring in his jurisdiction, also all the facts that may come to his knowledge respecting the source of contagion, whether brought into his jurisdiction from outside or occurring locally, as in the water-supply, etc.; if from suspected water-supply, he should advise the boiling of the water before using, pending a bacteriologic test of the suspected water.

At this time I want to call your attention, and if it appeals to you as it does to me, secure your support in an effort to be made at the proper time, to establish a chemic and bacteriologic department in connection with the State Board of Health here at Lansing. If this can be done, it will insure a great saving in expense to the physicians throughout the State, or to their patients, many of whom can ill-afford the expense of laboratory examinations, and further, it will insure a report based upon an analysis made by an expert.

The Upper Peninsula Medical Society, comprising the entire upper peninsula medical profession, passed resolutions, unanimously, endorsing this movement, at its last annual meeting, August 9 and 10, 1904. The Gratiot County Medical Society has, by resolution passed at its November meeting, endorsed it, and before the year is out, I hope to have the majority of the physicians of the State with me on the proposition, for it is one I believe that appeals to them.

Returning again to my subject, there are other and varied duties devolving upon the health officer, as the abatement of all nuisances, issuing permits for shipment of disinterred bodies, or bodies dead from a contagious disease, granting per-

mits for the same to enter his jurisdiction, etc., all these and more the health officer is called upon to supervise, and when we consider the very meager salary which is allowed him, considering the importance of his work, it is not strange that sometimes he neglects and slights his work, owing partly to this fact, and partly to the indifference of the physicians in practice in not coöperating with them. This condition obtains more particularly in the rural sections, where the local health boards fail to appreciate the importance of this work.

There are thousands of dollars spent every year in combatting smallpox after it has made its appearance, while it would be impossible to get that many hundreds of dollars allowed for restricting any of the other contagious diseases, any one of which carries a far greater mortality rate than does smallpox. This is shown in the following table: (Page 218).

For these and other good reasons, which must appeal to you, I would most earnestly urge upon the profession their hearty coöperation with the health authorities in this most important work, for I find it very difficult indeed to interest the masses in these matters, when the physicians themselves are indifferent.

There are other and just as important matters, as those I have touched upon, that, as physicians, should demand our attention and support, notably, this spitting nuisance. The American people are very much given to this habit; we are expectorating our lives away. The first thing a boy learns to do is to walk; the second, to spit over the banisters. Then the front tooth opens up fresh possibilities which lasts until corn-stalk cigarettes appear; after that the habit may be said to be formed, so that by the time he

**DEATHS IN MICHIGAN FROM THE FOLLOWING DISEASES FOR A PERIOD OF  
4 YEARS, 1901-1904.**

Diseases	1905	1904	1903	1902	1901	Average
1. Pneumonia.....	Data not Compiled	2685	2659	2637	2901	2720
2. Consumption.....	"	2648	2202	2088	2152	2272
3. Influenza.....	"	690	517	373	1254	708
4. Typhoid fever.....	"	633	601	608	645	622
5. Diphtheria.....	"	512	684	504	502	550
6. Meningitis.....	"	396	496	489	520	475
7. Scarlet Fever.....	"	206	200	277	312	249
8. Whooping-cough.....	"	145	381	289	163	244
9. Measles.....	"	193	180	238	79	172
10. Smallpox.....	"	27	29	42	27	31

can vote he is the "real thing," and the first thing he looks for on entering a room is a place to spit. It must be a soul-satisfying pastime, since so many men indulge in it to excess. I have seen men, in the presence of ladies, use in place of a cuspidor an empty fire-place, the polished floor, or even the hot-air register. There is no more fruitful medium for the spread of disease germs than the sputum, and yet you will see it deposited on our sidewalks, in street cars and other public conveyances, in public halls, churches and even in homes. It is a self-evident fact, that if we could thoroughly disinfect all discharges at all times, and under all circumstances, typhoid fever would be eliminated. Equally true, if the sputum could be taken care of properly, consumption, pneumonia and kindred diseases would be greatly lessened. I would like to inaugurate a crusade against this spitting habit, in the interest of decency and health.

One other subject I would like to speak of, and that is medical inspection of

our public schools. It is working great good in the cities that have it in force, and in my judgment it ranks next in importance to isolation and disinfection in the restriction and prevention of disease. Several cities in our state have adopted this, notably, Detroit, Ann Arbor, Grand Rapids, etc.; the results are most satisfactory to teachers, pupils, and the public generally.

I would be pleased to have an expression from this society, as it is a matter that is being taken up and adopted by other cities in our State, and as progressive and up-to-date as Lansing is in all other matters, I want to see her abreast of the times on health matters as well, for there is no more vital question that comes so near the homes of all of us, than this health question, especially when it has to do with our children.

I would be glad to welcome the physicians of the state, and especially of this society, to the department with which I am connected, at any time, for in a way, it is your department, created to assist the physicians in their work.

**Clinical Observations in Exophthalmic Goiter.**—By George Dock. The observations are based on 32 hospital cases observed in the course of ten years; 29 were women, 3 men. The predisposing causes could rarely be discovered. In 12, previous diseases or nervous shock were noted a short time before the characteristic symptoms. In these cases goiter was the first symptom, but in 12 others there was a goiter observed from 3 to 37 years before the other symptoms came on. The thyroid gland was enlarged in all cases. In 26 a systolic murmur was audible over the thyroid. Tachycardia was present in all but 2 cases, and in one of these had been present before the observations began. Observations on the blood pressure showed striking differences. In some the pressure was high, up to 180 mm. Eye symptoms were absent in only three cases. Emaciation was marked and striking symptom, in two cases amounting to almost or quite half the body weight. Diminution of hydrochloric acid in the stomach was observed in a number of cases, but hypermotility was often associated with this. Two of the patients died; one from complicating disease, the other with acute symptoms. Of the other cases, a number had chronic courses up to 15 years. Emphasis is laid on the importance of the early diagnosis. Regarding treatment, rest is considered most important, with symptomatic treatment. Experiences with some of the organic preparations and roentgen rays are mentioned. Surgical treatment is recommended, with certain limitations.—*American Medicine*, February 24, 1906.

**Splenic Luekemia.**—H. J. Thompson reports the case of a teacher, thirty years old and single. Her past history did not show any severe illness. In December, 1901, she had "nervous spasms," the result of overwork, and shock, occasioned by the sudden death of her sister. In December of the same year, she awakened one morning and found that she had lost the use of her limbs, and was in bed three weeks. Later on she regained the use of her limbs a little, but was very weak, with a pain in her left side, and soon after observed a growth on that side of the abdomen. In December, 1903, the skin was very dark in color over the abdomen; the menstruation had stopped several months before, and the kidneys were sluggish. The first Roentgen-ray treatment was given September 10, and continued once in five days until the end of the year. The menses reappeared immediately afterwards. All the treatments were given in a recumbent position, the patient being unable to sit up; a moderately hard tube was used, over the splenic region only, for fifteen minutes. As the treatments progressed, the symptoms abated, and soon after the patient returned home. In April she was able to walk without assistance, she gained flesh, and the menstrual periods were regular. From April until June she received three Roentgen-ray treatments a week. She returned home in June, lived out of doors all summer, and improved sufficiently to assist with the housework. Her weight increased to one hundred and thirty-seven pounds, and her waistline was reduced so that she could wear a blouse and belt, instead of a loose gown.—*Medical Record*, March 3, 1906.



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### Editorial.

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#### LAW VERSUS MEDICINE.

A pleasing illustration of coöperation between lawyer and doctor, is the recent action of the Chicago Bar Association, in requesting information from the Chicago Medical Society, regarding unprofessional conduct of any member of the Bar Association. This request was elicited by the action of a certain attorney in soliciting from medical men, personal injury cases, on a contingent basis and offering 25% of his fees to the doctor. The Bar Association, having for its purpose, among other things, the maintenance of honor and integrity in the practice of law, believes this to be unprofessional and tenders its services to the Chicago Medical Society, not only in reference to this particular matter, but in any other which will aid in the objects of the organization.

Instances of this nature, illustrative of the inter-dependence of two great learned professions, are especially pleasing to us as indicative of the dawn of a better understanding between lawyer and doctor.

The medical expert, often unqualified for his self-assumed position, has frequently been made the butt of legal sarcasm and ridicule and rightly so, but in the main, the courts and reputable attorneys are pre-eminently fair to members of

the medical profession, when testifying as to matters of fact and experience, and only when the doctor elucidates unfounded theories from a biased standpoint, often basically commercial, is he subjected to verbal indignities.

The gradual assumption of control of expert testimony by the courts, at the instance of both bar and medical associations, bids fair soon to place medical expert testimony upon the plane where it belongs.

In addition to the reformation of expert testimony and the elimination of unprofessional commercialism in personal injury cases, there remains one important step to be taken in the coöperation of lawyer and doctor, i. e., the protection of the doctor against the legalized blackmail, to which he is subjected at the hands of many lawyers, by reason of suit or threat of suit for alleged malpractice.

Inasmuch as the doctor is legally accountable for the possession of but an *average* amount of knowledge and skill, instances of actual malpractice are rare and yet, 5% of American physicians are, each year, harassed by suit or threat of suit for alleged negligent or unskillful treatment.

The usual underlying cause of these threats, as is also true of most personal injury cases, is the zealous desire of attorneys to get business, even though on a speculative basis. Business done on the no cure, no pay basis, is hardly professional for the doctor. Why, then, is it professional or even justifiable for the lawyer?

The docket of every court in the land is crowded with *bluff* cases in which no negligence can be shown on the part of the defendant corporation or individual, where the plaintiff's attorney incites the

action and advances the nominal fees, on the possibility of getting a compromise settlement without trial. If bond for costs, to the amount of even one hundred dollars, were exacted by the courts, this class of litigation would be limited to the occasional just claimant, and no one suffer thereby, except the ambitious lawyer.

While our viewpoint may be biased, it would seem to us a legitimate function of bar associations, to formulate a code of ethics, having for its object, the limitation, if not suppression of this class of business. It is certainly true, that because of this menace, it has become necessary, that most corporations and many physicians carry insurance for protection or protect themselves by organization for mutual defense.

Several insurance companies are now writing policies, offering physicians more or less adequate protection, and everywhere, interest is awakening in local or state plans for self-defense. The Chicago Medical Society and the Wayne County (Michigan) Medical Society, through its Defense League, being pioneers in this work. The Chicago Medical Society is fortunate in being able, by reason of its large membership, to defray the expense of defense from its own treasury. The Wayne County Defense League has its own dues and funds, and its plan is adaptable to every society, however small.

The local plan of defense offers protection which no insurance company can furnish by reason of the consolidation of interests and *esprit de corps* engendered thereby, and at merely normal cost.

Speaking for our local organization, it can be said that the Defense League has solved the problem of getting started, that it is financially strong enough to

*guarantee* the promised defense, and is ready, at any time, when feasible, to allow the District or State Society to take up and carry on the good work which it has so well inaugurated.

In thorough organization, lies the keynote of success; and the sponsors of the local plan will hardly feel satisfied until every physician in the state has the self-protection which we locally enjoy.

Then, suits for malpractice will be limited to the rare cases of evident, instead of alleged, negligence and the shyster lawyer will perforce seek an honest living or other fields of prey.



### "AMONG OURSELVES WE FREELY DISCUSS IT."

One evening during the past month, there appeared in the *Detroit Journal*, a shameful paragraph, which purported to be the statement, made to the police, by a certain physician in Detroit, who had been apprehended for performing a criminal operation. The physician is quoted as follows:

"There is nothing out of the way about that. It may be legally wrong, but morally there isn't anything the matter with it, as long as there is no life at stake. We do that kind of thing right along and while we physicians may publicly deny it, among ourselves we freely discuss it and admit our work along that line."

One statement in the above is as true as the others are damnably false. "Among ourselves we *are* freely discussing it;" we are discussing what shall be done with just such criminals as this physician is alleged to be. But are we doing anything to prevent it?

Is the practice of criminal abortion on the increase, as many claim it to be? So far as we know, no estimates as to its frequency in Michigan cities have been

made, but judging from the figures as given for Chicago, where Bacon believes that from six to ten thousand are done annually, there must be very many performed here in our own state. Every practitioner constantly hears of cases; no less than five cases came to our personal notice, in one way and another, last month. We believe that the number is increasing, not perhaps among the unmarried but among the married. This increase is largely due to the conditions of present day life, prevalent especially in the large cities. The number of apartment houses in Detroit which advertise "No children, no pets, no pianos" is daily increasing. The number of should-be parents who have neither the time nor the inclination to raise a family, is increasing.

The cause which produces the demand for abortions is social, and the remedy which would strike at the root of the demand, is also social. The profession has recently taken up a crusade against the prevalence of venereal disease, a duty long deferred. We should not be longer remiss in dealing with this other evil. We should take the initiative in aiding the criminal authorities to catch and convict the scamps responsible for these operations. If the great weeklies, such as *Collier's* and *The Ladies' Home Journal*, periodicals having tremendous circulations and far reaching influence, were to take this matter up as they have that of its little sister evil, the use of patent medicines, much in the way of education and enlightenment might be accomplished.

But to return home. *The Free Press* of Sunday, March 4th, contained no less than twelve advertisements which undoubtedly call attention to abortionists and abortifacients. Several others prob-

ably belong to this class, but in them the meaning is purposely somewhat veiled. Such advertisements are illegal, or ought to be. It is at least illegal to employ the mails in the sale of abortifacients.

Besides those who advertise there are certain men and women in Detroit—and what is true of Detroit is also true of every other city in the state—who are known to habitually perform abortions. We keep them—usually—out of our medical societies, but thereafter wash our hands of them and let them go their own way, plying their nefarious trade, unmolested. "Among ourselves we freely discuss it," and that is all.

Our duty is plain. The methods to be adopted for doing our duty are not so plain. We can at least do as we did with the subject of venereal disease. At the next meeting of the State Society, a small committee of interested men should be appointed, to study this subject. Such committee should have authority to appoint sub-committees in every part of the state. They should see to it that a symposium on the subject is held in every county society during the next twelve months, that the local papers are asked to co-operate, that the postoffice authorities are aroused, and that some of the lay papers which are so courageously fighting great evils, are asked to take up this matter. In these and in other ways, some good might perhaps be accomplished. Anyhow, we ought to do more than "to freely discuss it among ourselves."



### THE SEVENTEEN YEARS' WAR FOR PURE FOOD.

The Heyburn Pure Food Bill passed the Senate on February 21, and a great victory was thus gained by those who



have fought so long for this much needed reform. It has been a struggle lasting for seventeen years. While it has not yet of course become a law, the prospects for its passage are better than ever before.

The vote in the Senate was 63 to 4, and it is fair to assume that the four Southern Senators who dissented did so, not because of their opposition to the provisions of the bill, but because they believe it conflicts with State rights. And yet this apparently almost unanimous vote does not mean that all the Senators favored the bill, for several amendments, which, if carried, would have made the bill practically inactive, were lost by a narrow margin. The patent medicine men and the liquor men had strong influence, but it was not sufficiently strong to kill the bill.

The Heyburn bill makes it unlawful to manufacture or sell adulterated foods, medicines or liquors within the District of Columbia, the Territories or insular possessions of the United States and a misdemeanor to ship such commodities from one State to another. Any provision beyond this would be interfering with State rights and hence unconstitutional. Many States, however, have pure food laws, so that if fortune (or hard work) favors the final passage of the bill, much good will have been accomplished.

The opportunity for obstruction in the House is less than in the Senate, for once the Administration and Committee on Rules are committed to a measure, little short of an opposing majority can defeat it. We cannot believe that the Administration looks upon this measure with disfavor, and we hope that the Committee on Rules may not do so. However, the bill, at this writing, has not been reported out of Committee and every physician

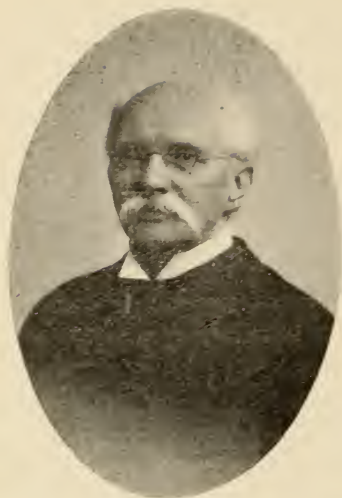
should see to it that a line is sent to his congressman, asking him to support the measure. Watch for the final vote and if he does not, let him hear from you.



In another column will be found the announcement of a prize essay competition offered in the interest of Cremation. While the personal beliefs and preferences of an individual are usually based on early training and environment, there is no doubt that considered as a sanitary measure, cremation is entitled to earnest consideration by the medical profession. There is no class of men, we are told, who favor cremation so universally as the medical profession. While this is but to be expected, from their opportunities of seeing the distressing sequences of the outdoor exposure of the living at an earth burial during inclement weather, and from their knowledge of the loathsome features of the slow combustion of the body, as effected by the elements, their knowledge of these and other facts should induce them to give this sanitary reform their support and to assume a more active part in this movement of hygiene. Health officers and boards of public health should encourage discussion of this topic in order that the laity may more fully appreciate the situation.



The American Medical Association will meet in Boston, June fifth to eighth. The rates have not yet been fixed, but it is altogether probable that the usual "fare and a third for the round trip" will be in force. If a large enough party can be made up and a time for departure, probably Sunday, June 3, agreed upon, special cars will be run from Detroit direct to Boston. No better opportunity for a trip east than this!



### FORTY YEARS OF SERVICE.

On March 8th, some two-score medical friends gathered together at a banquet, in Detroit, to celebrate the fortieth anniversary of Dr. Johann Flintermann's doctorate.

The gathering was a spontaneous one, those present being actuated by the one purpose of paying their respect to and showing their appreciation of one who has worked unceasingly and with marked honor in the community for forty years.

The system, thoroughness and circumspection, which have ever stamped Dr. Flintermann's work, have won for him the well-deserved reputation of a keen diagnostician and have served, for many years, as an inspiration to those with whom he has come in contact. As a token of this debt which the Detroit profession owes, a beautiful copy of a somewhat rare edition of Dante was presented to Dr. Flintermann, and was graciously accepted in a speech filled with gratitude and feeling.

The members of the State Society are a unit in extending congratulations to Dr. Flintermann. A man of lofty ideals, unassuming, modest and sincere, he has al-

ways had before him, the first duty of the physician, as expressed in the maxim *Salus aegroti summa lex est*. They are indeed the true physicians who, like him, enter the home of a patient, prepared with the necessary knowledge, imbued with the feeling of the great responsibility and determined to loyally fulfill their obligations.

The medical profession of Michigan, as well as the public, has reason to be thankful that we have among us a man with ripe experience who is still young and whose years of usefulness and inspiration will still be many.

Gesundheit!

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### Book Notices

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**The Practice of Medicine**—A textbook for practitioners and students, with special reference to diagnosis and treatment. By James Tyson, M. D., Professor of Medicine in the University of Pennsylvania, and physician to the Hospital of the University; physician to the Pennsylvania Hospital, etc. Fourth edition, revised and enlarged, with 240 illustrations, including colored plates. Octavo, pp. 1350. Philadelphia: P. Blakiston's Son & Company, 1012 Walnut St. 1906. Price. Cloth, \$5.50.

This new edition of Tyson's Practice is even better than those which previously appeared and this is saying much. The author has taken the opportunity to revise a few minor points and to make additions which recent progress has rendered necessary. Numerous illustrations have been added and there are now some 240 of them which elucidate the text and add to the interest of the reader.

The section on nervous diseases, revised in the third edition, by Spiller, remains one of the best and most readable of the short treatises on this—the most difficult subject in internal medicine. The chapters treating of animal parasites, have been enlarged and brought up to date by Allen J. Smith, a recognized authority on the subject. This section is profusely illustrated.

Throughout the book, especial attention has been given to diagnosis, pathology and treatment. The paragraphs relating to treatment are particularly full and interesting—more so than in any other similar work. Not only in medical treatment fully covered, but hydrotherapeutics and

physiotherapeutics are given full notice. The author's own preferences are explicitly expressed, giving the work the stamp of authority, often lacking in books which are prepared by compilation and not founded on actual experience. We venture to say that it is this feature, more than any other, which originally accorded the book instant recognition, and which has made four editions necessary within a comparatively few years.

The arrangement of the sections is systematic. After the definition of the affection to be treated, a comprehensive historical note appears in fine print. Etiology, pathology, symptoms, diagnosis (including most excellent sections on differential diagnosis), and treatment are all taken up *seriatim*. A judicious use of bold face type and italics makes ready reference easy. This feature, in conjunction with the full index, renders the work a splendid one for reference, and will be appreciated by him who runs and reads.

On the other hand, the simple and forceful English, which characterizes the author's style, makes easy and delightful reading for him who sits down for a quiet hour of study. Of 1,260 pages, not one is dull.

The type, paper and binding are all excellent.

The work will continue, as in the past, to represent the best of American Medicine, in other words, the best of modern medicine.

**Diseases of Infancy and Childhood.**—By L. Emmett Holt, Professor of Diseases of Children in the College of Physicians and Surgeons of Columbia University, New York. New, third edition, 6x9½ in., 1170 pages, illustrated. Cloth, \$6.00. New York: D. Appleton & Co. 1906.

The author's reputation is, in itself, sufficient recommendation of the new third edition of his book. But the excellence and completeness of the work cannot but elicit an expression of the sincerest approval from students of this subject, who will find it an invaluable aid.

The purpose of the author, in presenting a book for the student and practitioner, has been closely adhered to. The result is a concise, readable and thoroughly practical volume.

In this new edition, much of the matter in the two previous editions has been revised, and to it, valuable additions have been made, of which, the paragraphs on the subject of general anaesthesia are by no means of least importance.

Much new space is devoted to the topic of artificial feeding of the infant in health and in illness—a subject about which too much cannot be known, as the welfare of the child's future depends upon it to such a marked degree. Into this chapter, as into others, new charts have been in-

troduced for purposes of elucidation, and a number of the old illustrations have been improved, greatly augmenting the attractiveness and value of the work.

Among other revisions may also be mentioned, the article relating to the physical examination of the child, to which much has been added.

The brief additions to the chapter on rheumatism are of interest and the extra lines bearing upon diabetes accord with the general views at present held.

This edition contains about fifty pages more than the one preceding it, but notwithstanding the magnitude of his subject, the author has not digressed, but has given those topics consideration which are only essential to an up-to-date work on pediatrics.

That this text book has now passed its fiftieth thousand, is sufficient evidence of its excellence. It will long continue to be the standard English work on the subject.

**International Clinics.**—Vol. IV. Fifteenth Series, 1906. Cloth, 6½x9½ in., 312 pages; numerous illustrations. Philadelphia: J. B. Lippincott Company.

The last volume of this well known publication is somewhat delayed on account of the printers' strike, universal over the country. It contains 25 articles from the pens of men, for the most part well known, and with two exceptions, these articles are excellent.

Gottheil's contribution on the Treatment of Psoriasis is a good one and splendidly illustrated. Gwyn, of the University of Pennsylvania, presents a thoughtful and practical paper on the Treatment of some Common Gastric Disorders; Brown reviews our knowledge to date of the thyroid and the treatment of its anomalies, bringing out clearly the clinical application of the more recent work on the parathyroids. Craig's paper on Malta fever is an excellent contribution to the subject.

Among the surgical papers is one by Deaver, on the Results of Operations, in the Treatment of Diseases of the Stomach. A very convincing argument is set forth, showing that the surgical treatment is far more successful than the medical in various gastric diseases, notably in ulcer.

That Deaver's opinion is not prejudiced, is evidenced by the following sentences. "Nor do I approve of operation for all varieties of hemorrhage which may occur in the course of non-obstructive gastric ulcer. I think it pure madness to operate while the bleeding is actually taking place, with an idea of finding the bleeding point and ligating it."



Another paper worthy of notice is that of Freiberg, which presents some original work on the clinical course of joint tuberculosis, studied by means of radiographs.

Several gynecologic papers are included.

The two papers in the section on pathology are the best in the book. Warthin, of the University of Michigan, gives the results of an extensive piece of work, undertaken to determine the effects of Rontgen Rays upon the blood forming organs. We have space for but one of the ten conclusions, namely: "Based upon these studies, the therapeutic use of Rontgen Rays in Leukemia seems of doubtful value or even dangerous. Careful clinical and pathologic studies will be necessary to establish the fact of a positive cure in any case."

Simon contributes an excellent article on Eosinophilia.

In a series of monographs, such as are presented in these volumes, the authors should be more particular in giving references, for they would greatly add to the value of the work. A few papers, including the two last mentioned, are exceptions to the rule, in that they contain a complete bibliography.

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**The Ophthalmoscope and How to Use It.**—By James Thorington, A. M., M. D., Professor of Diseases of the Eye in the Philadelphia Polyclinic, etc. 5½x8½ in., 298 pages, 73 illustrations, 12 colored plates. Price \$2.50. Philadelphia: P. Blakiston's Sons & Co. 1906.

Although many believe that the ophthalmoscope is an instrument to be used only by the ophthalmologist, it is true that every man who practices internal medicine and particularly he who sees many patients suffering from nervous disorders, should not only be familiar with its use but should also be able to employ it himself.

This little work of Thorington has succeeded well in giving those directions which are necessary for the novice, for the text is clear and systematic and the illustrations faithfully portray the conditions, both normal and pathologic, with which the practitioner meets.

The first four chapters deal with the various forms of ophthalmoscope, the methods of examination, the estimation of refraction, the anatomy and anomalies of the eye and the normal eye grounds. In Chapter V, the structural alterations or changes which are indicative of disease are gone over *seriatim*. The important subjects of vision fields and perimetry are fully treated in Chapter VI. The remaining pages deal with the diseases of the retina, optic nerve and choroid, with a separate section on glaucoma.

The text is well written and edited. The colored plates are from the brush of Margaretta Washington—a guarantee of their excellence and reliability.

The book should be in the hands of every one who wishes to perfect himself in this important method of diagnosis.

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**The Physical Examination of Infants and Young Children.**—By Theron Wendell Kilmer, M. D., Adjunct Attending Pediatricist to the Sydenham Hospital; Instructor in Pediatrics in the New York Polyclinic Medical School and Hospital, New York; Attending Physician to the Summer Home of St. Giles, Garden City, New York. Illustrated with 59 half-tone engravings. 12mo., 86 pages. Bound in extra cloth. Price, 75 cents, net. F. A. Davis Company, Publishers, 1914-16 Cherry street, Philadelphia, Pa.

The physician who has to deal with infants and young children, and there are few who do not, will find this little book of Kilmer an interesting and helpful one. The idea of the book is not to exhaust or to even outline methods of physical examination in general, but merely to draw attention to the application of these methods to children and to point out wherein they differ from those employed in the adult.

In chest examinations, the author seems to lay more stress upon auscultation than upon percussion. Many would disagree with him on this as well as on the use of the percussion hammer, which is advocated in preference to the finger. Light percussion is the all essential method when examining the chest of a baby, and surely the finger method brings out the notes, in light percussion, more perfectly than does the hammer. However, these are very minor points, about which there are differences of opinion. On the whole, these chapters are excellent.

Examination of the throat, nose, eyes, ears, the method of obtaining blood specimens, stomach washing, lumbar puncture and laboratory examination of milk are briefly but clearly covered and well illustrated.

The book is well worth the price.

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#### Books Received.

- International Clinics, Vol. IV. 15th Series, 1906. J. B. Lippincott Company, Philadelphia.
- The Ophthalmoscope and How to Use It. By James Thorington. P. Blakiston's Sons & Co., Philadelphia.
- The Physical Examination of Infants and Young Children. By T. W. Kilmer. F. A. Davis Co., Philadelphia.
- Modern Clinical Method. Vol. II. Diseases of Metabolism and of the Blood. Animal Para-

sites, Toxicology. Edited by Richard C. Cabot, M. D. Instructor in Clinical Medicine at Harvard University. 650 pages, 58 illustrations. D. Appleton & Co., New York, 1906. (Full notice next month.)

The World's Anatomists. By G. W. H. Kemper, M. D. With 11 illustrations. P. Blakiston's Son & Co., Philadelphia.

## Reports

The State Committee on Venereal Prophylaxis arranged for a public meeting, under the auspices of the Wayne County Medical Society, on December 9, 1905. About 250 invitations were sent to prominent Detroit clergymen, members of the bar, educators, and business men. The meeting, held in the auditorium of the Museum of Art, was well attended and much interest was shown in the subject.

A number of short papers were read by the members of the profession. Dr. W. J. Herdman, of Ann Arbor, spoke on "**Nervous Affections Due to Venereal Diseases.**"

Both syphilis and gonorrhea cause diseases peculiar to the nervous system, but the latter of the two is under such a heavy indictment for the ravages it causes in other important organs and functions of the human body, that the injury it occasions in a direct manner, to the nervous system shrinks into comparative insignificance.

With syphilis the case is very different, for while its destructive action is by no means confined to the nervous system this is nevertheless a favorite territory for its invasions. It enters this important domain by several pathways and its invasions are always attended by most disastrous consequences. The nature of this enemy is such that no part nor function of this ruling tissue escapes; no age is respected.

*No Age Exempt from Syphilis.*—From the very beginnings of life in the child yet unborn, to the time when, by reason of age, the material body is laid aside, this enemy lies in wait to destroy it. When once it gains a lodgement within the body it either directly instills its subtle poison into and weakens or destroys those delicate cells upon which the highest functions of both body and mind depend; or it effects the same result, indirectly, by obstructing the blood and lymph channels along which the nourishment, essential to these cells, is conveyed.

In one or other of these ways many a child is blasted while still in the womb, and if born to

separate existence, it enters upon its life with a deformed and enfeebled body.

*Effects of Heredity.*—A large share of the great host of idiots, imbeciles and feeble minded, innocent incompetent, burdens to themselves, their families, to society and the state, are such by reason of syphilis.

To the same cause may be traced, in numerous instances, the lack of that developmental force which accounts for the imperfect eyes, ears or limbs, hearts, lungs and other important organs, which so many children receive as a part of their inheritance.

If perchance one escapes the dire effects of the prenatal ravages of this most potent virus, he or she is by no means safe at any period of later life from possible infection, for, as is well known, it needs but to gain access, by whatsoever channel, to the blood, the tissues and organs of the body for its work of destruction to begin.

*The Innocent Victims.*—Neither syphilis nor gonorrhea are, of necessity, diseases of venereal origin. This is, perhaps, the doorway by which their *materias morbi* gets access to the body most frequently, yet as long as the present ignorance, misinformation and indifference as to their capacity for evil exist, and barriers of defence against them are not raised, there are many avenues left open by which they may invade the bodies of the innocent.

Having once passed the portals of the body, the virus of syphilis attacks the nervous system most commonly by producing changes in the blood-vessels. No structure of the body is so dependent as the nervous tissue upon an abundant and uniform supply of blood. Every sensory, motor and mental function finds this indispensable to its action.

*First Mode of Invasion (Arteritis).*—The syphilitic virus excites a morbid cellular action which threatens the walls of the arteries of the brain, of the spinal cord and of the nerves. The currents of blood are disordered, obstructed, cut off. In consequence, nerve functions are deranged, weakened, paralyzed, often permanently destroyed. To this manner of invasion and the dire effects that flow from it, there is scarcely any limitation as to place and degree, except that the brain, having the largest mass and consequently the most necessity for abundant blood supply, suffers most. The hearing, the sight, the sensations of feeling or some of the important movements of the body, all depending upon the integrity of the nervous system, are likely to suffer. Defects both mental and physical of infinite variety result; functional, structural, varying in de-



gree and permanency in proportion to the locality and the extent to which the blood supply is cut off.

*Second Mode of Attack (Meningitis)*—A second mode of attack and one equally destructive, though somewhat less frequent than that just described, is inflammation of the membranes which surround the brain and cord, supporting them and carrying the blood-vessels and lymphatics that supply them (meningitis).

The products of this inflammation, like the changes in the blood-vessels, clog the pathways for nutrition, rob the nerve cells of their supply of food, irritate and compress them; and the parts thus damaged never fully recover, though prompt and appropriate treatment may remove some of the more prominent symptoms.

*Third Mode of Attack (Gumma)*—As a third mode of attack the specific inflammation due to this virus heaps up the products of its action in nodules and masses of new growth (gumma), which by crowding upon and compressing the delicate nerve tissue at one or another point, give to the disease the symptoms and effects of tumors, which always result in damage to the nervous tissue in greater or less degree, no matter what the treatment employed.

*Fourth Mode of Attack (Degeneration)*—But it is not only by these indirect modes of attack upon the nervous system that syphilis is so formidable an enemy to this as to other tissues of the body. In some less demonstrable but as surely causative manner it operates to reduce directly the vitality and resisting power of the nerve cells, so that they are prone to degenerate. Locomotor ataxia and parietic dementia, two of the most prevalent and intractable diseases of the nervous system at the present day, diseases involving both brain and cord and undermining their noblest functions, are now tracable to syphilis; and while this cannot be said, as yet, to be the sole cause of these degenerative diseases, it is generally conceded to be the chief factor in the production of from 70 to 80 per cent of them.

Nor is it the nerve tissue alone that is made to feel this weakening effect and is rendered less resisting to other hostile agents through the poisoning action of syphilis. The tissues of all important organs are either directly, or by reason of their lack of nervous energy, likewise enfeebled. The ravages of syphilis may break down the defences of the organism so that it is made a prey to other agents of disease.

*Weakens the Body as a Whole*—At a recent meeting of the National Association for the Study and Prevention of Tuberculosis, Dr. Abram

Jacobi, the eminent specialist, said in the course of his remarks on the causes of tuberculosis in children, "when in a family we see child after child show signs of tuberculosis, it is well to look for syphilis in the mother."

Thus this scourge, which we, as physicians, know to be largely preventable, if rationally dealt with in its incipient stages, is devastating humanity in the very strongholds of its highest civilization, and in ways most vital to its upward progress.

It will require all the forces that can be mustered by an enlightened and awakened intelligence, physical, social, educational, legal and moral, to co-operate for its suppression and overthrow. The burden has long been too great for the members of the medical profession to bear alone. The times seem ripe for a concerted and effective action on the part of all who wish their fellows well and are willing to work for that end.

Dr. C. B. Burr, of Flint, discussed "**Cost to the State of Patients Who Are in Our Asylums as the Result of Venereal Disease.**" (See *Detroit Medical Journal*, January, 1906.)

Dr. H. O. Walker's paper was on "**Venereal Affections as Seen in Surgery.**"

"**Venereal Affections as Seen in Ophthalmology,**" was discussed by Dr. Flenning Carrow. (See *Detroit Medical Journal*, January, 1906.)

"**Venereal Affections as Seen in Otology,**" was Dr. Emil Amberg's subject.

*Abstract*—Syphilis can affect any of the three parts of the ear.

The syphilitic affections of the outer and middle ear are not different in their nature from syphilitic affections of other parts of the body, but on account of their location they may lessen the efficiency of the same. Bruekner found that five per cent of middle ear suppurations were caused by syphilis. Wilson speaks of three children in a syphilitic family in whom, soon after birth, abscesses formed in both middle ears. Antisyphilitic treatment cured them. Baratoux has found that among 43 children born syphilitic and who lived to an age from a few hours to an age of four years, the drum cavity was affected 27 times. Also the mastoid process can be affected by syphilis as well as the eustachian tube. Syphilis can close up the eustachian tube and cause deafness, because the channel, on which the middle ear relies for the sustenance of the proper balance of air pressure, is put out of order. Besides, through this tube, suppurative processes can be transmitted from the throat, which is frequently affected in syphilis.



*The inner ear.* Diseases of the inner ear occur in consequence of acquired and inherited syphilis. According to Bruckner, seven per cent of nervous deafness are caused by syphilis. Dizziness, hardness of hearing and annoying subjective noises can accompany these disturbances. Baratoux found, in his 43 syphilitic children, the inner ear four times affected.

Gradenigo found among 1,404 cases of inner ear affections, 98 caused by acquired or inherited syphilis. Hereditary syphilis can cause deaf-mutism.

It has been observed that the ear of an offspring has shown signs of grave affliction even 28 years after birth.

We learn of the very sad fact that nature not only punishes the party who acquired syphilis by diminishing the function of vital organs and by endangering health and life, but that its cruel hand makes the innocent child suffer.

## VENEREAL AFFECTIONS AS SEEN IN PEDIATRICS.

DR. CHARLES GODWIN JENNINGS.

The incidence of venereal diseases in infancy and childhood has a side more pathetic than at any other period of life. Not only is the unfortunate child innocent, but the disease is inherited or acquired from a mother usually as innocent as her offspring and as ignorant of the cause of her condition.

The disastrous effects of inherited syphilis upon infant- and child-life are fairly well known and appreciated. While acquired syphilis in the adult is rarely immediately dangerous to life, the mortality of inherited syphilis is very high. In the active developmental period of intra-uterine and infant life the delicate organs and tissues form a most favorable soil for the activity and growth of the syphilitic virus.

Of 1,700 syphilitic pregnancies recorded by Hyde, one-third resulted in the death of the fetus before the termination of gestation. Of 2,038 syphilitic children in the foundling hospital of Moscow, over 70 per cent died. Of 1,121 syphilitic births observed by Hyde in America, 916 died within the first year.

Syphilis is conveyed to the ovum, (1) by the sperm cells of the father; (2) by the tissues of the mother; (3) from both parents. It is possible for the father to beget a syphilitic child and the mother escape infection. A child more often inherits the disease from its mother than from its father.

While the tendency is for the disease to disap-

pear in time, it may take years to do so. Syphilitic children have been born to syphilitic parents 20 years after the primary infection. In the life history of the disease there are periods of activity and periods of quiescence. Children conceived during periods of activity are syphilitic, while those born during periods of quiescence may be healthy.

The effect of syphilis is to kill the embryo, if the disease of the parents be sufficiently virulent, a condition which depends to a great extent upon the length of time that has elapsed since infection. The maternal history shows repeated abortions until finally, when the virulence of the disease has diminished, a living child is born.

Infants showing symptoms of syphilis at birth or a few days after, usually die before the end of the first year. Many with a less virulent infection may be saved by breast feeding, favorable hygienic surroundings and prompt and efficient medical care.

A certain number of children, apparently healthy at birth and during infancy, develop in childhood or early adolescence the various pathological manifestations of late syphilis. Thus the deformed Hutchinson teeth may mark the syphilitic taint through life. A syphilitic inflammation of the eyes may hamper the whole period of childhood and adolescence and leave a more or less serious permanent impairment of vision.

Deeply seated ulcerations and chronic visceral inflammations may render a child a chronic invalid and a burden to society.

Destructive syphilitic lesions of the bones and extremities may leave him a dependent cripple.

Thus, while the future of the offspring of syphilitic parents may justly cause apprehension, it must be recognized and taught that the outlook is not altogether a dark one.

A syphilitic father will not necessarily produce a syphilitic child nor will a syphilitic infant follow with certainty even if both father and mother be syphilitic. Medical surveillance and treatment during the fertile period of married life will reduce the chances of diseased offspring to a minimum and enable syphilitic parents to bear and rear a healthy family.

It is not probable that syphilis is transmitted to the third generation. The syphilis of the present time is not the terrible malady it was when it first infected Europe. The general infection of the race and the transmission of the disease through countless human beings has attenuated the virus and conferred a limited immunity upon those now living.

Only in the last few years has the far reaching

influence of gonorrheal infection upon infants and children been appreciated in the medical profession. At the present time it is little known to those outside, that the lightly held attack of gonorrhea is often as dangerous to child life as its feared and respected relative, syphilis.

The discovery of the specific organism of gonorrhea has enabled investigators to identify and remove pathological conditions and to trace them to the primary venereal infection.

Ophthalmia neonatorum is usually a gonorrheal inflammation of the eyes, infection taking place at birth from a mother ignorant of her condition. Nearly 11 per cent of the blind owe their misfortune to an ophthalmia neonatorum.

Subsequent to birth girls suffer from gonorrheal infection much more frequently than boys and in them late disastrous effects are more common.

Among the children of the poor and uncleanly, and in institutions, gonorrheal vaginitis is a common disease. In households the infection is carried from the older members of the family, by uncleanly habits. The entrance of a child with gonorrheal vaginitis into an institution is often the beginning of an epidemic that spares none of the female inmates.

While it is not often that the immediate effects of the disease are dangerous to life, the remote effects are of the most serious character.

Invasion of the uterus is usual in all severe cases of specific vaginitis in infants and children and extension into the fallopian tubes is not uncommon. These pelvic inflammations may lay the foundation of a chronic invalidism and may in after life be a serious impediment to marriage and maternity.

Extension of the inflammation to the peritoneum, bladder or kidneys, gonococcus septicaemia, and invasion of the heart and joints may immediately threaten life or result in prolonged grave illness or permanent impairment of health.

In the few moments allowed it is not possible to more than mention some of the disasters to their innocent offspring that may come from the indiscretions of parents, but enough can be said to bring emphatically to their minds the necessity of earnest public and private efforts to control the spread of venereal infections.

## VENEREAL AFFECTIONS AS SEEN IN GYNECOLOGY.

DR. J. H. CARSTENS.

The gynecologist quite often sees venereal diseases and their sequelæ. I will only refer to gonorrheal affections.

When a man marries and is affected with a venereal disease which he thinks is cured, but it is not, he very often gives it to his wife, during the first few days of married life. If promptly and energetically treated it might be controlled, but only too often it is not recognized or not vigorously treated and the result is extension of the disease to the womb and fallopian tubes, where inflammations of the ovaries and in the pelvis are started. These seldom subside, but often end in chronic invalidism and we may say, invariably, sterility. Sometimes the woman acquires the disease from her husband after she has been sick a long time, or when he and she have been separated, and the result is the same. That eminent English abdominal surgeon, Lawson Tate, was very emphatic and claimed that nearly all pelvic diseases of women, tumors included, were caused by gonorrheal infection, but this is shown to be a mistake. Diseases of the tubes and ovaries may be caused by other germs than the gonococcus, and in Germany where they have large hospitals and where they have patients under perfect control, it has been proven by a most searching investigation that only 50 to 55 per cent of pelvic and tubal abscesses or inflammations are due to venereal affections. Tumors are not caused by venereal diseases.

I want to also call attention to the fact that many women get this disease very innocently. I have known in my own experience of quite a few ladies getting gonorrhea by having their affected servants use the syringe of the madam. I raise this point simply to show how very careful a woman must be.

Knowing from a large experience that many of the inflammatory diseases of the female pelvic organs and the resulting sterility, are caused by venereal affections, I have been a strong advocate of controlling and preventing this disease, as much as possible. In order to do this I would suggest:

1. A most thorough education of the public in reference to the signs and symptoms, the danger of, and need of vigorous *treatment* of this disease.
2. A most careful investigation by physicians of every *suspected* case. Any case found to be gonorrheal should be subject to the most vigorous and continued treatment, until the disease is absolutely cured.
3. All professional and semi-professional prostitutes affected with the disease should be immediately sent to a hospital and kept there until cured.

## VENEREAL AFFECTIONS AS SEEN IN DERMATOLOGY.

DR. ALBERT E. CARRIER.

Covering the whole body, the skin furnishes an enormous surface for the development of sores of any kind, and when the sores are destructive in nature, they eat through the whole thickness of the skin, and the resulting scar is very disfiguring.

There are two venereal diseases that affect the skin, namely, "syphilis" and "chancroid."

Chancroid is a local disease which at the beginning is a small sore not larger than the head of a pin, but which grows rapidly, forming a large ulcerative sore that destroys the skin. There may be only one sore at first, or there may be several. The amount of tissue these sores may destroy will be realized when a single sore is often six inches in diameter, and as the sores may come upon any part of the body it is easily seen what a disfigurement would occur if it was on the face. The matter from the chancroidal sore is very contagious, and if it comes in contact with the skin will be very apt to cause other sores, and it is necessary to exercise great care to prevent this matter from coming in contact with the healthy skin. The lymphatic glands that are connected with the skin where a sore breaks out, become affected, swell up sometimes as large as a hen's egg, are very painful, and when matter forms in them, an enormous amount of tissue is destroyed, forming large abscesses which do not tend to get well, but spread by attacking new glands, and requiring a severe surgical operation for the removal of every particle of diseased tissue before a cure results. There is always danger that blood poisoning will occur. While this disease is local at the beginning, and may have only one little sore, it is always attended with the danger of affecting the lymphatic glands, and of its resulting in blood poisoning, and when recovery takes place the site of the sore is always marked by a very disfiguring scar that remains through life.

*Syphilis*—Syphilis furnishes about 12 per cent of all the cases that come to the physician who confines his practice to the treatment of skin diseases. Syphilis is a very common disease, and five per cent of all cases are contracted innocently; it is a disease that extends over a period of years and during all this time eruptions are liable to occur in the skin. This disease is contagious for three or four years and may be transmitted by inheritance to children from either the father or the mother during all this time. The disease commences as a single sore which de-

velops at the point where the poison entered the surface, and which may be so small as to escape notice entirely. Another fact which renders it liable to escape notice lies in its not being painful, nor does it itch, or burn. After a few weeks, however, the syphilitic has an eruption, which may first be discovered after taking a hot bath, or after severe exercise. The eruption shows first on parts of the body that are covered by the clothing. The eruptions, rashes, or sores that are found in syphilis differ with the age of the disease, attacking the superficial portion of the skin at first, and as the disease grows older attacking the deeper portions. The first rash is a red, or brownish red in color, showing on covered parts of the body. It is made up of spots separated from each other by healthy skin and not giving any uneasy sensations whatever. The eruptions of syphilis may simulate that of any other skin disease and it is a difficult matter to tell whether an individual has syphilis or not by the eruption only, and herein lies a great danger, for the disease can be caught from the rashes at any time during the first three or four years of the disease.

With the first sore we have enlarged glands, just under the skin but they are not tender nor do they ulcerate. The eruptions that follow the first rash are large, or small pimples that are reddish brown in color, may be small as a pin-head or large as a bean, and may appear on the face as well as other parts of the body; with the pimples we may have little boils, and when these break and dry up small pits like those of small pox will remain during life. Later in the disease, the sores are larger, deeper seated in the skin, and show little tendency to heal, forming ulcers that are covered with a thick, dark colored crust, occurring on any part of the body and when the sores are numerous, giving a very disfiguring, and disgusting appearance. If these sores happen to break out on the nose, or on the ear, or on the eyelid they may destroy these parts entirely. When located upon parts that are near bones, as on the head for instance, the ulcer eating through the skin will finally destroy the bone also. Words are inadequate to describe the results of these sores on the skin. Some of the sores of syphilis develop on the inside of the lips, on the tonsils, the inside of the cheeks, and on other mucous surfaces, and the disease is conveyed by them just the same as it is from the sores on the skin. When inside the mouth the sores often destroy both the hard, and the soft palate, and the back part of the nose. At their worst these sores beggar description. Direct



contact with a person suffering from syphilis is not necessary to contract the disease, it is caught by drinking cups, razors, pipes, combs, brushes, hats, bed linen, clothing, that have been used by a person who has the disease. This danger is not sufficiently realized by the people.

When the disease is inherited, the eruptions on the body are just the same as if the disease was caught in the ordinary way and are just as contagious. From the fact that nearly all syphilitic eruptions give no discomfort, no itching, smarting nor pain calling attention to them, they are often passed by as of little moment, and as the eruptions look like those found in other diseases, we are apt to forget the danger of contracting syphilis from them. To avoid this danger it would be better to regard all skin diseases as dangerous, and to take pains not to come in contact with them. Kissing is the cause of one-quarter of all cases of syphilis that are acquired innocently.

The following abstract of the **Michigan Marriage Law** was prepared for the meeting by Attorney George B. Yerkes:

Any person who has been afflicted with syphilis or gonorrhea and has not been cured of the same, who shall marry, shall be deemed guilty of a felony and upon conviction thereof in any court of competent jurisdiction, shall be punished by a fine of not less than five hundred dollars nor more than one thousand dollars, or imprisonment in the State prison at Jackson not more than five years, or both such fine and imprisonment in the discretion of the courts:

Provided, that in all prosecutions under this act a husband shall be examined as a witness against his wife and a wife shall be examined as a witness against her husband, whether such husband or wife consent or not. And provided further, that in all cases arising under this act any physician who has attended or prescribed for any husband or wife for either of the diseases above mentioned shall be compelled to testify to any facts found by him from such attendance.

The discussion was opened by Dr. Denslow Lewis, of Chicago, who said, in part:

The kindly introduction of your president justifies my presence. I trust I may be considered one of your number, for I am a graduate of the departments of pharmacy and medicine of your great university.

The cause of humanity appeals to all. The great work in which you are engaged is very near my heart. In season and out of season I have insisted for many years past that sex relationship should be understood and that the danger of ven-

ereal infection should be made manifest to the young, so that this infection might be avoided. I frankly confess I could not forego the pleasure of being with you tonight, for your meeting is the first of its kind ever held in America; it marks a new epoch in philanthropic prophylaxis and is, in effect, the birth of a new era in professional endeavor. This society may justly claim the honor of having taken the initiative in a movement which I believe is destined to extend throughout the country and to be productive of vast good.

Professional opinion has changed within the past few years. In Germany, France, Italy, Spain, Holland, and now in our own country societies have been organized for the study of the best means of every kind—moral, legislative, social, as well as medical—to be employed in the prophylaxis of these diseases. When the American Society of Moral and Social Prophylaxis was born on February 9, 1905, the president, Dr. Prince A. Morrow of New York, said: "A free discussion is, of course, an essential preliminary to any well-considered action, especially when such action proposes to deal with what is confessedly the most difficult of all the problems of social hygiene." This is the proposition I have always maintained and the only one for which I have fought. Free speech must be encouraged; free thought must be stimulated. Papers read in medical societies are of value, but our chief endeavor should be to reach the public, especially the young, and to diffuse the knowledge we already have. In the furtherance of these praiseworthy efforts this meeting to-night will, I know, produce definite results. It will serve as an incentive to other communities throughout the country. You have taken the first step and your example will be followed. The public must be taught the dangers of the venereal plague. I am overjoyed at the success of this meeting. Personally, professionally and officially, I express to you my sincere appreciation and I tender you my heartfelt thanks.

Forceful speeches were made by Dean Hutchins and Dr. Vaughan of Ann Arbor, Rev. A. H. Barr, Rev. L. S. McColester, Rev. C. L. Arnold, Rabbi Franklin, Rev. S. S. Marquis and Principal Frederick Bliss of the Detroit University School.

Dr. Herdman moved that, "A committee of six be appointed by the chair, of which committee the chairman of this meeting shall be a member, to take steps for a permanent organization in this state for the suppression and eradication by all proper means, educational, sanitary and legal, of the diseases caused by syphilis and gonorrhea."

"It shall be the province of this committee to

enlarge its membership to twenty, by the election of representative men and women from various parts of the state. Such committee, so enlarged, shall constitute a permanent committee on organization."

A few days after the meeting, the chairman announced the committee of six as follows:

Rev. A. H. Barr, Detroit.

Prof. Frederick Bliss, Detroit.

Dean Hutchins, Ann Arbor.

Dr. W. J. Herdman, Ann Arbor.

Dr. A. P. Biddle, Detroit.

### Report of the Amalgamation of Kalamazoo, Van Buren and Allegan County Societies.

At the annual meeting of the Kalamazoo Academy of Medicine a movement was inaugurated for the consolidation of the county societies of Kalamazoo, Van Buren and Allegan counties with the Kalamazoo Academy of Medicine, the reorganized society to be known as the "Kalamazoo Academy of Medicine (Kalamazoo, Van Buren and Allegan Counties)." It was necessary to retain the name Kalamazoo Academy of Medicine that our title to our splendid rooms in the Public Library might not be vitiated.

Amendments to the constitution and by-laws of the academy were presented (and adopted at the February meeting) to conform with the constitution and by-laws of the State Medical Society. The county societies of Kalamazoo, Van Buren and Allegan counties having voted to surrender their charters and unite with the Kalamazoo Academy of Medicine, were merged with the academy. All members of each society who were not already members of the academy were admitted upon personal application of each member in the usual way.

The Kalamazoo Academy of Medicine now has a membership of 82, of whom 73 have paid their state dues. This number includes 12 members who had paid their dues through the Van Buren county society just before uniting with the academy.

The academy has a regular monthly meeting occurring on the second Tuesday of each month. The next annual meeting will be held in December.

At the last annual meeting, the following officers were elected: Dr. A. H. Rockwell, Kalamazoo, president; Dr. N. A. Williams, Bangor, first vice-pres.; Dr. O. F. Burroughs, Jr., Plainwell, second vice-pres.; Dr. Walter den Blyker, Kalamazoo, secy-treas.; Dr. E. H. Van Deusen, librarian.

Board of Censors, 1906—Drs. G. D. Carnes, South Haven; R. E. Balch, Kalamazoo; O. H. Clark, Kalamazoo; H. B. Osborn, Kalamazoo; O. F. Burroughs, Jr., Plainwell; E. P. Wilbur, Kalamazoo.

Drs. F. A. Welsh and A. W. Crane have been elected delegates to the state meeting. Drs. O. F. Burroughs and Walter den Blyker, alternate.

WALTER DEN BLYKER, Secy.

## County Society News.

### CALHOUN.

The first quarterly meeting for 1906 was held at Battle Creek on March 6, at 2 p. m. The following program was carried out:

"**Breast Tumors in Young Women,**" Wm. A. Spitzley, Detroit, Mich.

"**Ear Conditions of Practical Importance to the Family Doctor,**" Edw. J. Bernstein, Kalamazoo, Mich.

"**A Few Electric and X-Ray Cases,**" Eugene Miller, Battle Creek, Mich.

A. S. KIMBALL, Sec'y.

### GRAND TRAVERSE.

At the annual meeting the following officers were elected:

A. H. Holiday, M. D.,—President.

I. A. Thompson, M. D.—Vice-President.

J. W. Gauntlett, M. D.—Secretary.

O. E. Chase, M. D.—Treasurer.

J. W. GAUNTLETT, Sec'y.

### JACKSON.

The afternoon session of the March meeting was given up to a discussion of obstetrical papers. In the evening, John F. Herrigan, city attorney of Jackson, read a paper on "**The Physician as a Defendant.**"

This was the beginning of a series of lectures on medico-legal subjects to be given by prominent lawyers of the city.

R. GRACE HENDRICK, Sec'y.

### LENAWEE.

At the quarterly meeting of the society, held February 13, 1906, the following paper was presented: "**From Graduation to Practice,**" by M. B. Prentiss, M. D.

The graduate in medicine, in beginning the practice of his chosen profession directly after receiving his diploma, finds himself not unlike

the newly arrived traveler in a foreign country. The chances are that the stranger's sole knowledge of the foreign tongue has been acquired at home. By a competent teacher and studious work, in the hands of his own masters, he thought himself quite proficient; but abroad, the inhabitants speak their language in a different way. They have other voices, their expressions are peculiar, they make strange gestures and utter their words so rapidly, the result is that while the bewildered stranger catches here and there a familiar word or a simple phrase, his diagnosis of the general meaning of what is said is apt to be very vague and confused.

The plight of the young physician is not much better. His mind is stored with excellent medical precepts, together with a fine assortment of correct prescriptions. He can discourse to his patient right learnedly, but, like the traveler, he can talk better than he can understand. In his mental outfit are the keys to the diagnosis of numberless diseases, but for the particular case in hand none of them seems to fit. He recognizes, as familiar, certain features, certain symptoms, but then there are others which are certainly out of place.

The art of medical observation and of appreciating symptoms at their proper value has not been acquired, or, in other words, the young graduate lacks practical experience. His four years' college course has afforded him more instruction than training. What I believe the young graduate wants more than his text books and notes to lead him in the beginning of practice is some of his own good, sound sense, together with the advice of some professional friend who has had years of experience in actual practice.

The graduate of today certainly is better qualified than was the graduate of twenty or thirty years ago, by reason of a more thorough and extended college course, but add to the graduate of today the experience of the medical man of twenty or thirty years of practice and you could truly say: "Knowledge is power, when conjoined with wisdom." The training of practical observation and experience is necessary before his knowledge can profit him. After he has obtained that which he much needs—a few years of practical experience—has had a taste of the hardships of professional life, has experienced the irregularities of living, has come to the realization that instead of a life of ease and pleasure that the practice of medicine amounts to actual toil, and after he has experienced some of the bitter and the sweet of the professional life, then he is

truly fitted to continue his way on to the road of fame.

At no period in our professional life, to my mind, is it better than that at this period, to devote a little more time and add a little more capital to our mental purse by taking a post-graduate course in some of our large cities. Today there are excellent opportunities in this country for the pursuit of such studies as are demanded at this period of the medical education. In New York and other cities, there are post-graduate schools and polyclinics, where courses are especially designed for the profession—courses of short duration, several of which could be pursued together, and in which the matriculant is brought in contact with an abundance of classified material, which he is able to study under the guidance of experienced specialists. The profession is beginning to realize the advantage of these post-graduate schools, and not only the young graduate but many of the older members of the profession are taking advantage of the wonderful opportunities they offer for the study of the art of medicine and surgery in all its branches. In my own experience in my course in New York a year ago, fully one-half of the doctors there attending, were members of the profession many years ago. I believe the post-graduate schools are very essential, not only to our mental but to our financial, purse as well.

The doctor who practices with an eye singly to his fee is false to his oath and false to his patient. In the early studies of the young physician, the commercial spirit is quite apt to predominate. The desire to prosper is a legitimate incentive. The greater the interest in his work the more likely that it will be effective and fruitful, but the prevailing motive should be the desire to acquire competence in his art. Fill well the mental purse and it will be seen how commercial aims may coincide with the legitimate requirements of science. The most productive work is always that which is directed to ends in which the mind takes an absorbing interest.

The interest of the medical man may be added to by judicious attention to his natural inclinations in any particular department of study. After the fundamental part of his medical education is completed, the physician soon finds his natural aptitudes tending towards certain special lines of study. By properly heeding these intimations, he will not only add a spark of enthusiasm to his study, but by giving his work more definite direction, he will improve his quality. The attempt to cover the whole field of medicine uniformly will result in uncovering his weak points.



The aim should be, while striving to acquire proficiency in all departments, to attain excellency in one. We have men in the profession to whom "specialist" justly applies, but the specialist has no true title to the name who is not first a good physician. It is not my intention to advise every doctor to become a specialist, but what I would urge is that each choose, sooner or later, some particular line of study in which he shall aim at an especially high standard of excellence, and from a good point of departure he can better attack the whole field. I do not mean that other departments of study shall be neglected, but that at some point there shall be a glow in his work, and the fire of enthusiasm once kindled will soon inflame the whole field of medicine and would have a tendency to keep us studious and better fit us for our life work.

#### MONROE.

The regular quarterly session of this society was held January 18, 1906, in Newport, at the residence of Dr. Jerome Valade. The meeting was well attended and the proceedings interesting, practical and profitable.

Dr. P. S. Root read a paper on "**Peritonitis**," which brought out a very general discussion.

Dr. C. T. Southworth read a paper on the "**Care of Scalp After Continued Illness**," and Dr. Valade reported two cases from his practice; one a case of "Herpes," the other, a case of "Foreign Body in the Alimentary Canal."

Dr. Jerome Valade was elected delegate to the state meeting, and Dr. C. T. Southworth, alternate.

Next meeting in Monroe, the third Thursday in April.

After the session, the members were banqueted by Dr. and Mrs. Valade, the *piece de resistance* being the celebrated Monroe county muskrat. These toothsome little animals had been raised and fattened on the doctor's own private preserve, and were served, both boiled and fried, to the king's taste. A hearty vote of thanks was tendered the host and hostess for the entertainment.

GEORGE F. HEATH, Sec'y.

#### Muskegon-Oceana.

The regular meeting of the Muskegon-Oceana Counties Medical Society was held at the office of Dr. J. F. Dendow, Muskegon, in the evening of March 3, 1906.

Dr. Gayfree Ellison gave a very instructive talk on the condition of medical service in the Philip-

pine Island campaign, as seen from the standpoint of a private in the ranks. Dr. Ellison was with the Kansas volunteers before obtaining his degree of M. D.

Dr. John Vander Laan, senior member of the board of directors, was not present, owing to his having recently passed through a severe attack of pneumonia, which happily was aborted. The doctor is now convalescent and a resolution of sympathy for him in his illness and pleasure at its danger being apparently passed, was unanimously adopted.

Dr. W. L. Griffin, of Shelby, Oceana County, was elected delegate for 1906.

Dr. Jacob Oosting, of Muskegon, was elected alternate delegate.

Dr. Griffin invited the society to hold its regular meeting at his home at Shelby, Oceana County. This invitation was unanimously accepted and date of meeting placed at June 8.

General discussion and adjournment.

V. A. CHAPMAN, Sec'y.

#### OSCEOLA-LAKE.

The annual meeting was held at Reed City January 10, 1906. The following officers were elected:

President—A. Holm, Ashton.

Vice-President—D. S. Fleischauer, Reed City.

Secretary and Treasurer—T. F. Bray, Reed City.

Delegate to State Society—H. L. Foster, Reed City.

Alternate—G. F. Fields, Chase.

THOS. F. BRAY, Sec'y.

#### O. M., C. O., R. O.

The O. M., C. O., R. O. County Medical Society held its regular meeting Feb 21, at Grayling.

The meeting was largely attended and the enthusiasm ran high.

Dr. John McLurg, of Bay City, presented a very able and interesting paper on "**Typhoid Fever**," which created a new interest in the diagnosis and treatment of that disease.

Dr. McLurg was tendered a vote of thanks for the courtesy which he extended to this society.

Dr. Stanley N. Insley, ex-president of the society, tendered a banquet at the close of the meeting and all present pronounced it as one of the best meetings, both scientifically and socially, in the history of the society.

CLIFFORD C. CURNALIA, Sec'y.

**Shiawasse.**

The regular monthly meeting of the society, held in the city of Owosso, March 6, was attended by about 15 members.

Dr. Joseph E. Marshall, of Durand, was elected to membership.

The plan of holding the meetings at the various towns of the county was discussed and left to the discretion of the officers of the society.

A judicial committee was appointed by the president to obtain an opinion from an attorney in reference to fees allowed by poor commissions for indigent surgical services.

The subject of "A County Fee Bill" was discussed by the members of the society and a committee consisting of one doctor from each town was appointed to confer with their fellow practitioners and obtain their opinion in regard to such a fee bill.

Dr. Edwin Elliott, of Chesaning, gave an interesting and instructive discussion on "A Review of a Year's Practice."

JAMES A. ROWLEY, Sec'y.

**WAYNE.**

General meeting, February 5, 1906. Dr. J. A. MacMillan read a paper: "**Colostomy in the Treatment of Cancer and Other Grave Lesions of the Rectum.**"

Recent statistics show that a mortality of about 25% follows extirpation of the rectum for cancer or other disease. Investigation of this high death rate demonstrated that the chief etiologic factor is sepsis. More than 50% can be traced directly to infection. My experience in these cases confirms what is now being advocated, that a preliminary colostomy is the only effectual way of diminishing the mortality from this cause. The colostomy should be performed a week or more before the extirpation. Several advantages are obtained from this procedure:

(1) The field of operation can be rendered nearly aseptic, before the radical operation is performed. This is attained by the absence of feces from the rectum and by daily irrigation with antiseptic solutions.

(2) From the time the artificial anus begins to perform its function the rectum receives the benefit of physiologic rest. The benefits from this factor must be seen to be appreciated.

(3) Should the disease be other than malignant, it will become manifest by the rapid improvement which in many cases with but little other treatment goes on to complete cure.

Colostomy in these cases of operable rectal

disease is attended with very little danger. It is easily performed, and if desirable it may be performed under local anesthesia.—*Author's Abstract.*

Dr. Louis J. Hirschman read a paper: "**The Treatment of Chronic Constipation Without Cathartics.**" This paper appears in full in the current issue of the JOURNAL. The discussion of this paper and the preceding follows.

Dr. J. H. Carstens: Operation for carcinoma of the rectum is a radical cure in even less than 15 per cent; still, operation is advisable. Constipation is more a habit than anything else. Many patent medicines depend for the good they do on evacuating the bowels and thus relieving the auto-intoxication, which accounts for many ills of life. People of constipated habit should drink two quarts of fluid, water or not, and take more exercise. Occasionally due to lacerated perineum.

Dr. F. W. Robbins: Examination for the underlying cause is important in every case, and laziness in this respect in treating so-called constipation may be costly.

Dr. Charles Douglas: Certain patients cannot take two quarts of fluid in a day without great disturbance of digestion. In certain instances, warming the water will assist in making it tolerable. As colostomy gives rest to an ulcerated rectum, so regulation of the diet in children, by preventing the production of irritant feces, and gas, can be made to do the same thing.

Dr. Max Ballin: If not seen early, colostomy will not alter the value of radical operation on a malignant rectum, but certain non-malignant cases can be improved in no other way. Constipation is too serious a matter to be left to quacks and osteopaths.

Dr. P. G. Sanderson: Advised a fixed time daily for the attempt to move the bowels. In preparation for operation on the lower part of the intestines, as bacterially clean a condition as possible should be induced by reducing the amount of food, by exhibition of acetozone or some other effectual disinfectant, and by colonic flushing.

Dr. C. D. Aaron: If the constipation is spastic, not atonic, the measures mentioned are contra-indicated. Oleum-petrolatum is the remedy. Spastic constipation is manifested by a palpably tense, contracted sigmoid.

Dr. W. F. Metcalf: If earlier diagnosis were made, operation would be more commonly a radical success. In women, the lower rectum can be removed by incision through the perineum, and the continuity of the remaining gut with the anus restored.

Dr. MacMillan: Rectal carcinoma should be diagnosed early, but even in moderately advanced

cases, colostomy, besides assuring diagnosis, causes a surprising shrinkage of the disease, and thus is an excellent preparation for operation.

Dr. Hirschman: The paper was presented to show that there is a non-surgical side to proctology, and to set forth as available for the general practitioner, a nature-like effectual method of treating chronic constipation, after carefully excluding, by proctoscopy and other means, structural obstruction. This method can be practised without much exposure, and does not require the use of a proctoscope for the introduction of the pneumatic dilator, as in the older methods.

Meeting of Medical Section, February 12, 1906. Dr. T. B. Cooley read the paper: "**Treatment of Tetanus.**"

*Case Reports.*—Three cases were reported, two of which were seen in consultation. All three recovered. In the first, a very severe case following blank cartridge wound, after a week of treatment, including daily curretting of the shallow wound, without improvement, further exploration revealed very minute fragments of stocking in apparently healthy tissue below base of wound. Recovery followed their removal. The third, a case of multiple gunshot wounds of the leg, was used as an illustration of the occasional necessity for amputation. Antitoxin (240-300 c. c.) was used in all three cases, but was not apparently an important factor.

*Etiology and Bacteriology.*—Nothing new under these heads.

*Pathology.*—The work of Gumprich, Marie and Morax, and Meyer and Ransom, and the recent contradictory work of Zuprick, were reviewed briefly, with the conclusion that neither theory was sufficiently demonstrated, and the whole ground must be gone over again.

*Symptoms and Diagnosis.*—Diagnosis is frequently not made early enough, because physicians do not have the possibility of tetanus clearly enough in mind.

*Prognosis* was discussed at length, with some analysis of existing statistics, and following conclusions drawn:

1. Antitoxin has not reduced the mortality so much as has been claimed.
2. The so-called "idiopathic" cases are the most favorable, while the "Fourth of July" form is always grave.
3. The rapidity of development of symptoms after their appearance is a better guide to prognosis than the incubation period.
4. Early diagnosis and treatment affect prognosis favorably.
5. Under intelligent treatment mortality should not average over 40%—probably less.

*Prophylaxis.*—Methods well known, but not commonly enough practiced. Prophylactic injections of antitoxin imperative in all blank cartridge wounds—all others where infection is particularly likely.

*Treatment.*—General indications:

1. To remove infection.
2. To neutralize toxin.
3. To break up cell-toxin combination.
4. To keep patient alive.

1. *The Wound.*—Remove foreign matter and unhealthy tissue. Give air free access. Use non-caustic disinfectants. When there is doubt as to possibility of removing infection from wounds, amputate.

2. *The Use of Antitoxin.*—When given intravenously or subcutaneously it will neutralize circulating toxin. If Meyer and Ransom are right, injections into motor nerves and lumbar cord are rational, but cannot do all that has been claimed by them. If Zerprick is right, they are irrational. Injections into upper dorsal and cervical cord for relief of urgent symptoms are not irrational, but their value is not proved. Liberal doses should be used in any method.

3. *Other Special Methods.*—

*Bacelli's Carbolic Acid Treatment.*—Remarkable results reported from Italy not observed in America. Treatment deserves thorough trial.

*Matthews' "Cell Catharsis."*—Such a process very desirable in tetanus. No statistics of practical results. These two methods might be combined.

*Murphy's Morphin-Eucain Injections.*—The most rational recent proposal for control of spasm. Recommended as routine treatment.

4. *Symptomatic Treatment.*—Still the most important part of treatment. Failure to meet indications promptly frequently results in death of patient. Importance of quiet, freedom from disturbance of senses.

Feeding and nursing necessity of constant watchfulness. Morphin-eucain injections, or morphin and chloral, to control spasm. Chloroform must always be at hand for emergency.

#### GENERAL CONCLUSIONS.

1. Tetanus is probably not so hopeless a disease, as we have been accustomed to suppose.
2. Prophylaxis should be more generally carried out.
3. No treatment has been proved to be specific.
4. The important points in treatment are:
  - a. Get rid of infection at once, and be satisfied with no less than absolute certainty of having done so. When in doubt, amputate.



b. Use anti-toxin freely, but don't expect too much of it, nor neglect other indications.

c. Ensure for your patient comfortable quarters, the least possible disturbance, and intelligent nursing. He must never be left alone. Control spasm by morphin-eucain injections, or morphin and chloral, but be always ready to use chloroform. Be liberal with your drugs.

5. We need accurate statistics, and all cases should be reported in full. (Author's abstract.)

Dr. E. M. Houghton: American antitetanic sera are standardized, but not uniformly. Behring's unit is the amount of antitoxin that will neutralize enough tetanus toxin to kill 40,000,000 grams weight of white mice. Sera contains from five to fifteen of these units per c. c. At a meeting of the American Bacteriological Society, December, 1905, a committee was appointed to determine a uniform standard. One grain of pure toxin from bouillon culture of tetanus is sufficient to kill a hundred men or more. Antitoxin is correspondingly potent.

Dr. David Inglis: The wound should be thoroughly opened under an anaesthetic by a surgeon. A trifling wound must be made a large one. It should be remembered that the treatment of a patient is not an experiment on antitoxin alone.

Dr. W. H. Hutchins: Culture from an engineer's hand that had been thoroughly opened surgically and soaked in one to six thousand corrosive repeatedly gave positive findings. In another case, seven cultures were made from below powder grains after death, the skin over the place in each instance being actually sterilized by cauterization; all the cultures were positive. In a third case, that was fatal from "idiopathic" tetanus, an unnoticed splinter in the toe, that had not excited any inflammation at all, gave positive culture. Magnesium sulphate injection into the cord proved successful in one case after antitoxin seemed to be failing.

Dr. C. S. Oakman: Antitoxin has proved disappointing as a curative means. Prophylaxis means surgery, by a surgeon. In a series of developed cases, none with an incubation of less than nine days recovered. About seventy per cent of pistol wounds of the palm in a series in Boston gave positive cultures, yet under prophylactic treatment in none of these did tetanus develop.

Dr. T. A. McGraw, Jr.: It was the custom in New York to search for the wad, and apply to the wound strong phenol, followed by alcohol. In a series there of suspected cases, no tetanus developed under this treatment.

Dr. H. S. Olney: Spoke of subcutaneously

feeding, by injection of 200 c. c. sterilized olive oil, in order to avoid disturbing a tetanus patient by rectal alimentation.

Dr. H. M. Rich: Spoke of a patient who died of tetanus through infection from a varicose ulcer.

Dr. Cooley: Conclusions drawn from existing statistics are probably unfair to antitoxin, because in most cases it is used in rather small amounts. Mass action is desirable, and 50 c. c. or more in a day is not excessive dosage. Given a case, all measures of treatment reasonably likely to do good should be adopted at once.

WILLIAM E. BLODGETT.

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## Medical News

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The government printing office has just issued a most interesting brochure of some 80 pages on the Medical and Sanitary Features of the Russo-Japanese war. It is in the form of a report by Surgeon William C. Braisted to the Surgeon General. It is worth having, and can be obtained free by writing to the Navy Department, at Washington.

The Ohio State Board of Health has decreed that all trolley and steam lines, running outside of a municipality, shall provide cuspidors for the passengers.

The British Medical Association will meet in Toronto, Ont., next August.

The new hospital at Sault Ste. Marie was formally opened on February 1st.

An Exposition of the History of Medicine in Art will take place at Berlin, on the occasion of the opening of the Kaiserin Friedrich-Haus from the end of February to the middle of April. The exhibition will comprise original paintings, copper-plates, book-plates, statues, medals, old illustrated books and manuscripts, relating to medicine, Roman and other ancient surgical instruments found in Germany, etc.

The Michigan State Board of Health has decided to issue all bulletins, pamphlets, etc., which they publish, in a uniform style, under the title "Public Health, Michigan." This will be a decided advantage in appearance and accessibility, as well as a great saving in postage.

The chair in medicine at Vienna, left vacant by the death of Professor Nothnagle, has been filled by the appointment of Van Norden, of Frankfurt.

The faculty and students of the medical department of the University of Michigan observe "Founders' Day" every year on February 22, holding exercises in one of the campus auditoriums in honor of the founders and early professors of the medical department.

This year the man selected for special honor was Dr. Moses Gunn, whose connection with the university covered a period of eighteen years. He was appointed professor of anatomy and surgery in 1849. This was the year before the opening of the medical department for students, although it had been included in the legislative act organizing the university in 1837.

From 1852 to 1854 Dr. Gunn's title was professor of surgery, and lecturer on anatomy. In the latter year he became professor of surgery, the title which he retained until his resignation from the university faculty in 1867, when he accepted the chair of surgery in Rush Medical College, Chicago. He died in Chicago, Nov. 3, 1887.

A paper on Dr. Gunn's life and work was read at the Founders' Day exercises by Dr. Charles B. de Nancrede, professor of surgery in the university. After the address a reception was held in Barbour Gymnasium.

Professor Czerny, who has held the chair of surgery in the University of Heidelberg since 1877, has resigned, in order to devote his entire time to the duties of director of the Institute of Cancer Research.

Lockhart Medical College was opened at Peking, China, on February 1st.

The directors of the Michigan Cremation Association offer a cash prize of fifty dollars (\$50) for the best essay on the subject, "Cremation as a Sanitary Reform." The essay is to contain from 2,000 to 2,500 words, must be typewritten, and sent in by July 1st, 1906. The essays will be submitted to the judgment and decision of a committee appointed by the Cremation Association. Each competitor is requested to sign his essay with a nom de plume and enclose his name in a sealed envelope, on the outside of which is also written the nom de plume. Essays and en-

quiries should be directed to the secretary of the association, Dr. Preston M. Hickey, 32 West Adams avenue, Detroit, Mich.

An international committee has been formed to solicit and receive contributions for a monument in honor of the late distinguished surgeon, Johannes von Mikulicz-Radecki, of Breslau, Germany. Drs. W. W. Keen (Philadelphia, W. S. Halstead (Baltimore), J. B. Murphy (Chicago), F. Kammerer (New York), who have been requested to serve on this committee, appeal to the surgeons of the United States and Canada for subscriptions to the fund. An opportunity is afforded not merely to testify to our esteem and affection for Professor von Mikulicz, whose memory is cherished by every surgeon of the land, but also to express our appreciation of Germany's splendid achievements in surgery and manifest our desire to strengthen the cordial relations existing between the men of science of the two countries. Contributions may be sent to any member of the committee.

## Michigan Personals

Dr. W. F. Clute, of Gladwin, was married January 13, to Miss Winnifred Tyler of the same place.

Dr. S. C. Gurney, formerly of Detroit, has entered the army as medical inspector, and has left for service in the Philippines.

Dr. Walter H. Sawyer, of Hillsdale, the new regent of the university, took his seat at the January meeting of the board.

Dr. J. A. Attridge, recently of Detroit, has removed to Lansing, where he will devote himself to surgery.

Dr. R. S. Dupont has moved from 40 Howard street to 57 Fort street west, Detroit.

Dr. J. A. McMillan, of Detroit, read a paper on "Recto-sigmoidal Tampons in the Treatment of Chronic Constipation," before the Chicago Medical Society, on February 4th.

Dr. Victor C. Vaughan, of the State University, announces that he will be in Detroit on Tuesday and Thursday afternoons for consultation and office practice.

Dr. and Mrs. R. A. Newman, of Detroit, have gone to Italy.

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Dr. Beverly D. Harison, ex-president of the State Society, was recently tendered a banquet at the St. Claire Hotel, Detroit.

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Dr. F. W. Robbins, of Detroit, has returned from a visit to the Mayo Clinic, in Rochester, Minn.

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Dr. A. H. Eber, of St. Clair, has been given a commission as surgeon in the United States army, and left Jan. 17 for Fort Russell, near Cheyenne, Wyoming, to report for duty. Later he expects to be sent to the Philippines.

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Dr. John H. Howard has moved from Byron, to 689 Campbell avenue, Detroit.

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Alma Sanitarium has a new medical superintendent, Dr. R. B. Corbus, formerly a practitioner in Detroit, who succeeds Dr. Fenton Turck, of Chicago, resigned.

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Dr. F. J. Schultz, of Ionia, who has been acting as interne at the State Asylum, has been promoted by Supt. Long to be an assistant physician, and Dr. W. J. Maxwell, of Toledo, is also appointed an assistant physician. This will dispense with the interne.

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Dr. M. C. Sinclair, of Grand Rapids, has been appointed a member of the medical pension examining board of that city.

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Dr. O. E. Chase, of Traverse City, is absent in New York.

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Dr. R. C. Smith, formerly of Alpena, will locate in Spruce.

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Dr. J. W. Hawkey has removed from Alanson to Hesperia, where he will take the practice of Dr. W. A. Crandall.

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## Deaths

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On February 5th, Dr. Charles E. Bailey died at his residence, South Jefferson street, Ionia, of diabetic gangrene. A few days before his death, he had the right leg amputated above the knee, in the vain hope to stay the destroyer. Dr. Bailey graduated from the Michigan College of Medi-

cine, at Detroit, in 1881. He practiced at Orange, in Ionia County, until three years ago, when he removed to Ionia, thinking to spend the remainder of his years in quiet comfort, as he had acquired a competence. He was a member of the Ionia County and the Michigan State Medical Societies.

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Dr. James G. Conner, of Ionia, was found dead in his office, February 6th. He had been on the street but a few moments before and in usual health; but a heart trouble was responsible for his sudden death. Dr. Conner graduated in 1867 from the Rush Medical College. He spent the most of his active life as a practitioner in Ionia County and city. He held the office of city physician at the time of his death and had held the office several terms. The physicians of the city, irrespective of school, all met at the court house and passed resolutions of condolence, copies of which were forwarded to the bereaved families.

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Dr. W. W. Munn, for some thirty years a practitioner in Lansing, died February 10, after long suffering.

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Dr. G. W. Stone, of Metamora, died very suddenly, February 6th. For thirty years he had practiced in Lapeer County, for a number of years with his brother, Dr. D. F. Stone, now of Bay City.

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Dr. Jewett Williams, Jr., of Adrian, aged 43, died on March 9th. Dr. Williams started life as a telegrapher. He graduated from the Detroit College of Medicine in 1890 and took a post-graduate course in a New York hospital. He was always interested in electrical science. He owned the first X-ray machine and the first automobile in Adrian, and to the latter can be attributed the primary cause of his death, a malignant growth on the pelvic bone, resulting from being hit by the crank of the auto. He leaves a widow and one son, Vincent, a student of the M. A. C.

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Dr. H. T. Calkins, the oldest practitioner in northern Michigan, died suddenly of heart failure at his home in Petoskey, March 5. He was a Democrat and prominent in public affairs for nearly thirty years, and was active in business and social life until his health failed, a year ago. He leaves a widow and three sons.

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Dr. R. H. Darling, late of Crystal Falls, died at Fond du Lac, Wis., March 2.



## Correspondence.

Port Huron, February 20, 1906.

Editor State Journal:

There is an attempt on the part of the Equitable, New York Life and Prudential Companies, all of recent unsavory notoriety, to cut down expenses in the most vital of all the work of the insurance business. Any company that thus cheapens its medical service is bound to suffer in its future increased losses.

I trust that no member of the Michigan State Society who has any respect for himself or his profession, will submit to these cheapened rates. If Paul Morton can earn \$75,000 per annum by presiding at the board meetings and looking wise, the physician who safeguards the present policy holders by excluding undesirable risks, is surely entitled to the paltry fee of five dollars.

Let us lend our influence to forwarding the interests of those substantial companies which show that they know where money is wisely spent, namely in securing the most competent medical examiners procurable and then giving them a decent fee for their services.

The following will explain itself.

Very sincerely yours,  
MORTIMER WILLSON,  
Councilor for Seventh District.

### A CIRCULAR LETTER.

New York, February 15, 1906.

Dear Sir:

By order of the president, we advise you that on and after March 1st, 1906, the fees for medical examinations allowed by the Equitable Life Assurance Society, throughout the United States and Canada, will be as follows:

\$3.00 for each examination where the amount applied for is \$3,000 or less.

\$5.00 for each examination where the amount applied for is over \$3,000 and less than \$25,000.

\$7.50 for each examination where the amount applied for is \$25,000 or over and less than \$50,000.

\$10.00 for each examination where the amount applied for is \$50,000 or over.

(An extra allowance of \$1.00 will be made when an additional specimen of urine is obtained by order of the Society.)

The loading for expenses in connection with our business is a percentage of the premium, and

the uniform fee heretofore paid has made the expense of procuring a small policy too large, whereas a larger fee can properly be paid in connection with larger policies.

We do not wish to be understood as assuming that it is less work to examine a risk for \$1,000 than one for \$5,000, but the Society can properly pay more for examining a \$5,000 risk than it can for the smaller amount.

We trust that the foregoing schedule will be satisfactory to you, and will thank you to fill up, sign and return to us at once the enclosed postal.

Very truly yours,  
MEDICAL DIRECTORS,  
The Equitable Life Assurance Society.

Port Huron, February 20th, 1906.

Medical Director, Equitable Life Assurance Society, New York:

Dear Sir:

Your circular letter of Feb. 15th is at hand and contents carefully noted.

I had heretofore received a similar notice from the Prudential Company, and promptly refused to do work for the company at the cheapened rates for examination.

It is well known to you that the majority of the policies will come under the cheapened rate, and only the exceptional policy will be above the old fee for examination.

I hereby decline to do any further work for your company under this new rating. You will have no difficulty in getting cheap men for cheap rates, but in the end your company will suffer for it.

Any board of directors who will cut down fees in the most important work in the insurance business, thus letting in a flood of undesirable policy holders, while it votes huge and unearned salaries to its own officers, is undeserving the support of the medical profession and the public in general.

You are therefore hereby notified of my resignation as a medical examiner of the Equitable Life.

Yours truly,  
MORTIMER WILLSON,

Cadillac, Mich., February 21, 1906.

To the Editor of the Michigan State Journal:—

I have just learned that Doctor Leeson, of this place, is making use of the names of all the physicians of Cadillac to endorse the wonderful healing power of his patent medicines, which he now has upon the market.

Not one of the physicians ever gave a written endorsement or anything equivalent to one to Dr. Leeson or to anyone else and Dr. Leeson has already been notified to discontinue the use of our names in his advertisements.

As soon as my attention was called to the matter, I sent the following letter to Dr. Leeson.

*John Leeson,*

*Cadillac, Mich.*

Sir:—My attention has just been called to a printed testimonial to which my name is appended as having been signed by me, and which testimonial is appearing in a printed circular of yours, entitled, "The Friend of Suffering Man."

You must know that I never authorized any such recommendation of you or your medicines, and that I did not sign the testimonial or any other. You are therefore hereby forbidden to further use my name in connection with this or any other testimonial of any of your compounds.

This notice to discontinue the use of my name applies to the distribution of any circulars or printed matter on hand at the present time as well as to the printing of any further circulars. I trust that you will carefully observe the requirements of this notice and thus avoid trouble in the future.

Yours truly,

(Signed) B. H. McMULLEN.

This assumption on the part of this man is something extraordinary and I am glad that our attention was called to the matter before it became a more serious one.

Yours very truly,

B. H. McMULLEN.

To the Medical Profession of the State of Michigan:

It is probably known to most of you that for several years past the Alumni Association of the Detroit College of Medicine has held public clinics and lectures covering over a period of from three to ten days preceding the day of commencement. Each year brings new faces to our meetings, and each sees the old ones return.

The coming Clinic will be held May 7th to 17th inclusive. The executive committee are striving to make this the most profitable meeting yet held. They see that while it is enjoyable and good that alumni should meet and talk over old times, renew old acquaintances and enjoy the social entertainments, yet this, after all, is not the summum bonum. Men desire something more than enjoyment, and so while the committee has not forgotten the pleasurable side of these gatherings,

yet our energy has been spent in a different direction.

We hope to make a ten-day clinic so inviting and educative that men from all over our State will see that it is for their best interest to attend. To this end we have invited some of the best men in America to come and give us a clinic on their respective branches of study. It goes without saying that we have been bountifully successful when we can offer the profession such men as Doctors Frank Billings, of Chicago, who will give a clinic on diseases of the digestive system; Bart E. McKenzie, of Toronto, Canada, a clinic on orthopedics; George Dock, of Ann Arbor, a clinic in heart disease; Howard Kelly, of Johns Hopkins University, a clinic on gynecology, and James E. Tuttle, of New York, one on diseases of the rectum. These, with our Detroit men, will give us such a feast of good things that no one can afford to stay away.

We desire your presence and you are all as welcome as our own alumni. For all this there is absolutely no charge except a registration fee of \$1.

You are most cordially invited to attend.

Very respectfully,

H. WELLINGTON YATES.

President D. C. of M. A. A.

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### SURGICAL SUGGESTIONS.

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For a single intravenous infusion, as to combat the shock of hemorrhage, it is not essential that the solution contain any of the blood salts but the most abundant one—sodium chloride. For repeated infusions, however, as sometimes used in treating various toxemias, it is better to employ also the other salts, the solution being made of sodium chloride 0.9, potassium chloride 0.03, calcium chloride 0.02, water 100.

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Enlargement of the veins at the sides of the abdomen is indicative of obstruction to the flow of blood in the inferior vena cava; distention of veins about the umbilicus suggests obstruction in the portal circulation. The former may be associated with varices of the lower extremities, the latter with hemorrhoids.

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Do not be too hasty in ascribing the cause of pain in the tendo Achilles, or Achilles bursa, to an ill-fitting shoe. First exclude gonorrheal infection.

## Progress of Medical Science

### MEDICINE.

Conducted by

H. S. OLNEY, M. D.

#### Hematuria and Albuminuria After Urotropin.

—V. KARWOWSKI reports a case of a man, 48 years old, who was given  $7\frac{1}{2}$  grains of urotropin, three times a day, on account of phosphaturia, and with good results as far as the disappearance of phosphates was concerned. But after using the drug for two weeks, suddenly severe pain was complained of, and the urine became bloody and contained 0.2% albumin. The symptoms disappeared on discontinuing the urotropin and reappeared on again giving the drug, hence there was little doubt as to its being the cause of the trouble. He has been able to collect 13 other cases in the literature, and thinks that the cause is the decomposition of urotropin into formaldehyde in the blood, instead of in the urine as normally occurs.—*Monat. f. prakt. Derm.*, Bld. XLII, No. 1.

#### Significance of Small Quantities of Sugar and Albumin in the Urine.—

BURNET is much impressed by the relative frequency of finding small amounts of albumin or sugar, or both, unexpectedly or accidentally—that is, in cases which show no other evidences of renal deficiency or of diabetes. He says that very often, by reason of strain or long continued severe mental exertion, anxiety, etc., the metabolic processes become impaired and digestion affected, and, although there are no definite signs of actual organic disease, an examination of the urine may disclose albumin or sugar, or both. This occurs most often in young males. Another class of cases which show similar conditions of the urine, are those of pronounced gouty type; the urine contains a trace of albumin and at times small amounts of sugar, easily disappearing on proper treatment, but recurring when the condition of health is poor. These persons very often live to old age, when the albumin and sugar become persistent, but not excessive, and need give rise to no especial alarm. BURNET objects to the use of the term “physiologic albuminuria,” and he doubts if every any albumin escapes into the urine, without some previous impairment of the glomerular epithelium, even though this impairment may be slight and rapidly recovered from. Formerly all such cases of transient albuminuria were regarded as in-

cipient Bright's disease; then a reaction set in, and these cases were treated as of no consequence; but BURNET believes that all should receive most careful attention, especially as to work, diet and environment. Most of them do well but a certain number drift on into organic disease. He regards traces of sugar, as indicative of more serious disturbance of nutritive processes than traces of albumin, and when occurring in youth, its is of more serious import than in middle age. In the latter class of people, heavy eating and drinking are often etiological factors.

**Conclusions.**—The presence of albumin in any appreciable amount in the urine is not normal or physiologic, but does not necessarily mean that the existing disturbance of function is permanent or progressive. At the same time, it cannot be denied that a certain number of cases, which at first are rightly placed in the above category, later on show signs of definite, organic, kidney disease. (2) The presence of sugar in the urine in any appreciable quantity is abnormal; in the young, it is of serious import, and if persistent, is likely to lead to diabetes; in people past middle life, and especially in those of gouty type, it is of less consequence and usually yields to treatment more or less speedily, to recur, however, in some cases, under conditions similar to those under which it first appeared. (3) The presence of both albumin and sugar in the urine indicates serious disturbance in the metabolic processes, calling for relief, but under favorable conditions, these patients may continue, in at least fair, average, health, for many years.—*British Med. Journal*, Jan. 20, 1906.

#### Consumption of Different Kinds of Sugar in Diabetics.—

PETTITI has made an elaborate series of experiments in Senator's clinic on this subject and his conclusions are as follows: All kinds of sugar introduced into the rectum are absorbed as such. Sometimes sugar thus introduced is made better use of in the metabolism, than when given by mouth; sometimes the opposite is true; it is not known under what circumstances the one or the other applies. Whatever the kind of sugar introduced into the diabetic, either by mouth or by rectum, the secretion of sugar is always increased and the form of sugar in the urine is always dextrose. Sugar of milk seems to be best used by the diabetic, and cane sugar the worst; PETTITI thinks that sugar enemas, especially of sugar of milk, could be considered in the diabetic diet.—*Berliner klin. Wochenschrift*, 5 Feby., 1906.



**SURGERY.**

Conducted by

MAX BALLIN, M. D.

**Amputations Below the Knee.**—CLAPP made inquiries from one hundred surgeons and thirty-five limb-makers about their experience as to the value of the different methods of amputating the foot and leg and the ultimate usefulness of the stump was especially considered. The conclusions from these inquiries are: An ideal leg amputation seems to be superior to many Chopart, Symes and most Pirogoff amputations. The Lisfranc gives a very satisfactory stump. In amputation of the leg, be certain of sufficient flap to properly cover the end of bone, regardless of how close this may come to the knee joint. Flap must be considered first, length of stump second. The most uniformly good results are obtained by making the long anterior with short posterior flap, bringing the scar well away from end of stump. Redundancy is always undesirable. When the length of the stump is at the discretion of the operator, it should be from 6 to 9 inches below the lower border of the patella. Periosteal flap with coaptation of muscles over the end of bone is always desirable. Always cut the fibula one inch shorter than the tibia, and when the amputation is near the knee-joint, disarticulate the fibula. In all these amputations nerves should be cut as short as possible.—*Journal American Medical Association*, February 10, 1906.

**Stomach as Contents of Right Diaphragmatic Hernia, With Secondary Protrusion Into Abdominal Cavity, Diagnosed as Right Sided Pyonephrosis. An Anatomical Curiosity.**—A Turk, 50 years old, was operated on for stone in the bladder. He also showed a tumor in the right lumbar region, that seemed to fluctuate and disappear sometimes, without causing any change of urine, but still was considered a pyohydronephrosis. Patient died soon after the operation.

The autopsy showed that the major part of the stomach was situated in a diaphragmatic hernia sac. The same protruded both into the pleural and abdominal cavity. The hernia ring was situated in front of the inferior vena cava. It was the abdominal part of the hernia that had imposed as the fluctuating tumor. The stomach was adherent to the hernial sac and showed several round ulcers, and as contents, a large white crystalized stone. This stone was proved to consist of salol which the patient had taken for a cystitis and which had remained in the hernia pouch of the stomach. There was no record of traumatic origin of the hernia.—Hamdi: *Deutsche Zeitschrift f. Chirurgie*, Vol. 79, p. 313.

**Enucleation of the Prostate for Hemorrhage.**

—A man, 57 years old, had repeated severe hemorrhages from the bladder. There were no signs of stone in the kidney, no colics, no shadow of stone in skiagraphs. Neither could any stones be felt in the bladder. The only positive symptoms were a very large prostate and the profuse hemorrhage. There were also no other symptoms from the large prostate, no retention of urine, no frequency of micturition. The blood came away in large quantities and was bright. Suprapubic prostatectomy was performed and 32 small stones were found in a post-prostatic pouch. The left lobe of the removed prostate showed three patches of extravasation, no doubt the cause of the hemorrhage. Patient made an uneventful recovery, no further bleeding occurred. SIR THOMPSON considers this the first case, where the removal of the prostate has been advocated or deliberately practised for alarming hemorrhage.—*British Medical Journal*, Jan. 27, 1906.

**Scopolamine—Morphine—Ethyl Chloride—Ether Anaesthesia.**—ROYSTER applies this method in the following way: At intervals, varying from a half hour to two hours before the time set for operation, (one hour has been the average time), there is given a hypodermic injection of morphine one-sixth grain and scopolamine 1-100 grain. When the patient is brought in, the ethyl chloride is first administered by spraying it on gauze folded in several layers over the nose and mouth. This requires, as a rule, one minute to produce a primary anaesthesia. When this stage is complete, the cone saturated with ether is placed over the face, and in four or five minutes more the patient is ready. A few deaths have followed the use of scopolamine—even a single dose—and whether or not attributable to scopolamine, this is enough to make us feel that it is not harmless. Moreover, the appearance of the patients under its influence associated with morphia has been such as to suggest alarming thoughts—*Surgery, Gynecology and Obstetrics*, February, 1906.

## GYNECOLOGY AND OBSTETRICS.

Conducted by

REUBEN PETERSON, M. D.

**Hysterectomy for Fibroids of the Uterus.**—

DEAVER, reporting upon 250 operations for fibroids of the uterus, concludes as follows:

Fibroids of the uterus do not require removal unless they are productive of symptoms; but when they do become symptom-productive they should be removed promptly, before the patient has been weakened by toxemia, hemorrhage or sepsis.

Abdominal supravaginal hysterectomy is the operation to be preferred in the vast majority of cases.

Myomectomy is applicable only to younger women, in whom the tumors are few in number and subperitoneal in character.

Pan-hysterectomy is to be employed only when intraligamentary growths, whether uterine or ovarian, render the performance of supravaginal amputation difficult or dangerous.

The ovaries or a part of one ovary should be preserved in every woman who has not reached the age of the menopause, unless they are distinctly and indisputably diseased, or unless their retention would needlessly prolong and complicate the operation.

DEAVER makes it a rule to drain when there is oozing, in pelvic operations, which cannot be controlled by catgut sutures, which do not entail risk to the ureters. Even a small clot while sterile at the onset, does not necessarily remain so; while, if proper drainage is used, the risk is certainly minimized, if not removed altogether. In supravaginal hysterectomy he uses large clamps on the broad ligaments, cuts and then ties, thus making a short operation. In the complete abdominal operation, when the uterus is large, and the pelvis deep, making it difficult to reach the uterine arteries, he makes a supravaginal amputation, then grasps the cervix with the Volcella forceps, and cuts it out of the vagina with a pair of scissors, thus making a very rapid operation. In the vaginal operation he invariably uses Pryor's vaginal clamps.—*American Jour. of Obstet.*, Dec., 1905.

**Myomectomy and Ovariectomy During Labor**—DORAN reports two abdominal operations for the removal of tumors during pregnancy without interruption of that process. In the first case an adherent, subserous fibromyoma was removed by myomectomy from a patient two months pregnant. The patient was delivered at term after a lingering labor of 36 hours, due to hydramnios.

Thumim tabulates 62 cases of simple myo-

mectomy in pregnancy, performed between 1885 and 1900, with six deaths, two from sepsis, both infected before operation; one from peritonitis, also existent before the removal of the tumor; two from "heart failure," and one from hemorrhage of the stump. Only ten patients aborted. Enucleation is easier during pregnancy, because the hyperplasia of the connective tissue favors the manual separation of the tumor from the uterine walls.

In the second case, a solid fibroma of the ovary weighing 11 ozs. was removed from a woman three months pregnant. The tumor was attached to the right appendages by a very narrow pedicle. The patient went to full term, and was delivered of a normal, healthy child.

Ovariectomy during pregnancy is attended with very little danger to the life of the mother, and not much to the fetus. In 486 ovariectomies during pregnancy collected by McKerron there were 451 recoveries. McKerron demonstrates that the mortality due to the operation for the removal of the ovarian tumor may be reduced to nine in this series. In 289 cases there were 54 interruptions of the pregnancies with loss of the children. Very bad results may follow postponement of the operation until after labor.

Fibroma of the ovary resembles in many respects a pedunculated subserous uterine fibroid. It is more dangerous during pregnancy than the latter, which is more apt to rise up out of the pelvis as the pregnant uterus increases in size. Fibroma of the ovary is more frequent in young women and, for the reasons stated above, pelvic impaction is not uncommon.

According to Coudert, in a recent monograph on solid pelvic and abdominal tumors of the ovary associated with pregnancy, it is advisable to operate as soon as the diagnosis is established no matter what may be the nature of the tumor. This is because the removal of a fibroid of the ovary during pregnancy is usually an easy task, involving little damage to mother or child, while it is quite otherwise with any kind of operation during labor. The endeavor to push up a pelvic tumor during labor, according to Bland-Sutton, in opposition to all the canons of surgery. The dangers of bursting a dermoid full of grease and hair are evident—half measures in cases of pelvic tumors complicating pregnancy, are deadly, while bold surgery has proved itself triumphant.—*Journal of Obstetrics and Gynecology*, November, 1905.



## PATHOLOGY AND BACTERIOLOGY

Conducted by

A. P. OHLMACHER, M. D.

**Cirrhosis of the Pancreas in Diabetes.**—

Amplifying his previous reports, HERXHEIMER now communicates the results of a very thorough study of the pancreas in five additional cases of diabetes coming directly under his personal observation. A striking uniformity characterized the pancreatic lesions in these cases which consisted of a pronounced atrophy of the parenchyma, both the individual cellular elements and the glandular acini, accompanied by a proliferation of the connective tissue, varying in amount and distribution. In all these cases, Langerhan's islets were very numerous and prominent; most of them were of the ordinary size, though occasional colossal cell groups were found, apparently produced by the confluence of several newly formed islets. The majority of these islets were normal, though many closely invested with connective tissue, were sclerotic. Hyaline degeneration of Langerhan's cell groups could be detected in each of the five cases, always involving but a portion of the islet, very irregular in its distribution, not affecting the component cells, but confined to the capillaries and the connective tissue. Hyaline metamorphosis of the smaller blood vessels of the parenchyma was noted in each pancreas. HERXHEIMER maintains that in all these cases he could satisfy himself as to the origin of Langerhan's islets from the parenchymatous acini, the stages of the process being readily traced. According to his view, a degenerative process in the parenchyma of the pancreas with pronounced connective tissue proliferation and various evidences of regeneration, that is, a true cirrhosis, constitutes the morbid histology of pancreatic diabetes. He dissents entirely from the theory which ascribes to a destruction of Langerhan's islets, a prominent part in the causation of diabetes, and the hypothesis of vicarious hypertrophy of these cell groups in non-diabetic affections of the pancreas also meets his disapproval.—*Virchow's Archiv*, 1906, Bd. 183, Heft 2, pp. 228-341.

**The Adrenals in Tuberculosis.**—From 30 autopsies in cases of tuberculosis, taken at random, BERNARD and BIZART studied the suprarenal glands. Most of the cases were of phthisis, others of acute general tuberculosis and of tuberculosis localized in the pleura, liver or kidneys. Lesions such as adenoma, amyloid degeneration, hemorrhage or true tubercle of the adrenals were excluded from the study which concerned itself with a characteristic alteration of the organ manifested by increased consistency, and shown by

histologic study to be a sclerosis, most evident in the cortex but also invading the medulla. Inconstantly associated with this sclerosis was a lymphocytosis, and it was accompanied with an atrophy of the cells and tubules composing the adrenal parenchyma. Compensatory process was signalized by the presence of zones of regenerating adrenal tubules and by hyperplastic parenchymatous nodules in the cortex. What part this form of sclerosis had in producing the occasional slight melanoderma, as compared with the more pronounced lesions (tubercle, amyloid, adenoma and hemorrhage), could not be settled. *Jour. de Physiologie et de Pathologie générale*, 1906, T. VIII, No. 1, pp. 84-92.

**The Influence of a Serum Specific for Trypanosoma Brucei Upon the Trypanosome of Sleeping Sickness.**—KLEINE and MÖLLERS conducted experiments to determine the specificity of serum from animals rendered immune to trypanosome infection. The present report concerns the effect of a serum described by Koch and obtained by administering to an ass, periodical intravenous injections of white rat's blood, at the stage of maximum infection with *Trypanosoma brucei* (the parasite of nagana or tsetse-fly disease). Its protective and curative properties for nagana infection were conclusively demonstrated by experiments on mice. The same serum was, however, ineffective in controlling the usual progress of the disease induced in mice inoculated with blood containing *T. gambiense* (the trypanosome of Sleeping Sickness), thus additionally demonstrating the distinctive variation of the two species of pathogenic flagellates, and the selective affinity of the serum of nagana.—*Zeit. f. Hygiene*, 1906, Bd. 52, Heft 2, pp. 229-237.

**The Effect of Brilliant Green Upon the Nagana Trypanosome.**—Following their previous communication on the use of malachite green in experimental tsetse-fly disease, MENDELSTADT and FELLNER give the results following a trial of the anilin, brilliant green. The use of anilins to combat experimental trypanosomiasis is not new, the procedure having been tried by Ehrlich and Shiga leading to the recommendation of "Trypanroth." Aqueous brilliant green (1 to 200) in subcutaneous injection effectually eliminated normal trypanosomes in 24 to 30 hours from white rats whose blood was teeming with trypanosomes. Subsequent tests of the blood of such treated animals showed it to be non-infectious. The same result was obtained in a monkey. Combined with arsenic administration, the effect of the anilin was heightened. A cyst-like "resisting stage" (?) of the trypanosomes was found after treatment with brilliant green, and the conjecture is advanced that this body represents a form which harbors in the spleen pending its future development.—*Zeit. f. Hygiene*, 1906, Bd. 52, Heft. 2, pp. 263-281.



## PHARMACOLOGY AND THERAPEUTICS.

Conducted by

C. W. EDMUNDS, M. D.

**Coagulation Time of the Blood.**—WRIGHT and PARAMORE report their results from the use of several agents to alter the coagulation time of the blood. Calcium chloride, given in 60 grain doses, produced its maximum effect in about one hour, when the time required for coagulation was from one-third to one-half as long as normal. In one case, the time was reduced from two minutes and ten seconds to thirty-five seconds; in another instance, from two minutes and fifteen seconds to forty-five seconds. This increase in the coagulability lasted, in some cases, for eight days, the period of time over which observations were made. Calcium lactate, also given in 60 grain doses, gave similar results, excepting that the effects were manifest earlier than with the chloride, sometimes in twenty minutes, and the maximum was attained in three-quarters of an hour. In one case, when the last observation was made, seventeen days after the administration of the drug, the increased coagulability was still present.

Magnesium carbonate exhibited in like doses produced the same effects.

Cow's milk, probably from its content of calcium and magnesium salts also lessens the coagulation time of the blood. For this purpose about one and a half pints daily are sufficient. This action of milk the authors think may predispose to thrombosis, in cases of typhoid fever which are fed on a diet consisting largely of this food.

In rare cases, calcium salts seem to have no effect when given by the mouth, probably because, for some reason, they are not absorbed. In such instances, the effect may sometimes be produced by administering the salts by hypodermic, and for this purpose the lactate should be used, in 1 to 20 dilution, as the lactate is more soluble than the chloride and less irritating. Citric acid lessens the coagulability of the blood. In one case the time was increased from one minute to two and a half. The authors found this condition

persisted for about a month and then, in spite of the continued use of the drug, the coagulability gradually returned to the normal.—*Lancet*, Oct. 14, 1905.

**Digitalis in Cardiac Failure.**—BRUCE, in a clinical lecture on the action and uses of digitalis in cardiac failure, makes the following points as to the use of this drug. Where it is given in the ordinary doses of the pharmacopoeal preparations, diuresis does not appear before the third or fourth day of administration. If the drug then fails to produce diuresis, it is because it is not given in large enough doses and instead of being discontinued it should be given in larger amounts. The small irregular pulse, met with in cases of cardiac failure under treatment with digitalis, is not an effect of an excessive but of an insufficient dose. After the diuretic action is obtained, the drug must not be suddenly withdrawn but the dose must be slowly reduced before its final removal, continuing it for some time after the disappearance of the dropsy.

The changes in the characters of the pulse, especially as regards frequency, in response to digitalis, precede the appearance of diuresis and persist after its disappearance. BRUCE does not regard aortic insufficiency as any contra-indication to the use of the drug.

He does not consider that such preparations as Nativelle's crystallized digitalin, digitoxin, etc., possess any great advantage over the pharmacopoeal preparations, in as far as the time of appearance of diuresis is concerned, but strophanthin seems to act more quickly and might be employed where a rapid effect is desired.

He closes his address with the advice to "Measure the urine." It is an accurate and sufficient index of the patient's progress, a test which is very easily and rapidly carried out and about which there can be no mistake. Differences of opinion may arise in regard to the changes in the pulse and heart sounds, but volume of urine can be absolutely determined.—*British Medical Journal*, Jan. 6, 1906.

## PEDIATRICS.

Conducted by

R. S. ROWLAND, M. D.

**Pleural Effusions, Serous and Purulent, in Children.**—At a special meeting of the British Society for the Study of Disease in Children, J. G. EMANUEL remarked that serous effusions are four times as common as purulent in adults, but in children, they occur in about equal numbers. In adults, a purulent effusion is often secondary to serous, but in children, it is generally purulent from the first. Seventy-five per cent of empyemata in children are pneumococcal and these may be either secondary to pneumonia or primary. Streptococcal empyema is rare in children, but common in adults. Epyemata containing staphylococci, often indicate tuberculosis.

Speaking in regard to the quantity of fluid, DR. CARPENTER said that it is variable. In simple effusion, 46 ounces, in a child of six, was the most he had removed. Of pus, the average, in his experience is 8 to 10 ounces, caught at the time of operation but a large amount drained away subsequently.

DR. SUTHERLAND referred to the frequent absence and slight character of the symptoms in many cases of moderate effusion. A diagnosis can only be made by careful examination of the chest, noting the position and condition of the lungs, heart and diaphragm, as indicated by stomach resonance, and the hepatic dullness. The chief use of the exploring needle is not to determine the presence of fluid, but to distinguish between serous and purulent effusion.

DR. CARPENTER, in describing various clinical types, mentions a common form, with signs of consolidation of the upper and middle lobes and deficient, very rarely absent, vesicular breathing over the lower lobe. In another type, the chest may be full from apex to base with good, but distant, vesicular breath sounds or distant tubular breathing, perhaps heard only on deep breathing. With this extreme effusion, there may be a typical resonance, the breathing clear and distinct, expiration prolonged and unduly audible, compared with inspiration. In another type, there is dullness over the lower lobe and deficient entry of air. Sometimes the breath sounds are distant tubular. In either case, there may be loud tubular breathing at the upper limit of dullness, with friction sounds or not, sometimes with pneumonic crackles only. Skodaic resonance can frequently be obtained, in front, over the corresponding apex, above the clavicle, below it in some situations,

and sometimes behind. On the healthy side, the breath sounds are extra-puerile. Percussion gives fluid dullness and fluid resistance, but both may be encountered over a solid lung. Because the dullness is not of fluid character, it does not follow that fluid is not present. Broncophony contraindicates fluid.

Exploration is alone reliable in determining whether an effusion is purulent or not. No danger need be apprehended from passing an exploring needle into a pleura full of fluid, but it is dangerous to pass a needle into a cirrhotic lung, and it may be dangerous to wound a pneumotric lung.

CARPENTER strongly advises free incision, and usually resection of one or two ribs, in purulent effusions. While admitting that some empyemata may recover by aspiration, only repeated once or more, he did not think that there are any advantages attached to the method and there are many disadvantages. With simple effusion, if the pleural cavity is full, aspiration should be performed at once for fear of sudden death. Simple fluid should not be left in the chest longer than three weeks lest the lung contract adhesions. If there be fever, the fluid should not be aspirated, lest there be reaccumulation. Aspiration should cease as soon as the child commences to cough.

DR. HOBHOUSE said there could be no doubt that it is possible to cut short the acute pleurisy and prevent effusion by active measures in the early stage, but when once effusion has fairly commenced, it is very doubtful whether it can be cut short by medical measures. Two different lines of treatment have been pursued by different authorities. In the first instance, it was sought to reduce the quantity of fluid by increasing the fluid output and reducing the intake. With this object, diuretics, diaphoretics, and purgatives were freely given and a thirst diet adopted; most authorities are agreed that the results obtained are by no means proportionate to the discomfort entailed. If a reasonable trial of medical measures is insufficient to reduce the effusion, it will be necessary to remove the fluid by puncture.—*The British Journal of Children's Diseases*, January, 1906, p. 25.

## DERMATOLOGY AND SYPHILIS.

Conducted by

A. P. BIDDLE, M. D.

**Hereditary Syphilis.**—TAYLOR attempts to prove, by cases, that third infection in syphilis is an established fact. A synopsis of the first case is as follows: First—Grandmother infected with syphilis in 1869, had secondary and tertiary lesions of much severity. She was careless of treatment. She was the first genitor. Second—In 1872 this woman gave birth to a girl baby which presented classical hereditary syphilitic symptoms. After many vicissitudes this child (the second genitor) grew up seemingly healthy and strong, and never having been infected with acquired syphilis, she in two years gave birth to a baby daughter. Third.—In 1890 this second genitor gave birth to a miserable weakling girl, atrophic, marasmic, with very little strength and vitality, who at birth gave no distinct evidence of hereditary syphilis (third generation), but who in five years developed true dystrophic symptoms; Hutchinson's teeth, keratitis, ear troubles, and osseous swellings, and later showed unmistakable evidence of a virulent form of late syphilitic infection (third) in characteristic gummatous tumors and ulcers. This third syphilitic by inheritance is now growing up a victim of infantilism and general atrophy. A synopsis of the second case is as follows: First.—A healthy woman, married to a man, syphilitic two years, contracted syphilis two years later coincidentally with the development of pregnancy. Second.—She gave birth to a male child who, soon after birth, was characteristically heredito-syphilitic and later developed typical undoubted evidences of inherited taint, which showed themselves for several years. He never was infected with acquired syphilis. He married a healthy girl. Third.—Three years after the marriage of this second genitor, the wife gave birth to a thin, weakly girl, who presented the appearances of infantilism. At 4 years many dystrophic symptoms of the bones and joints developed and were promptly cured by active anti-syphilitic treatment. This case, therefore, was a clearly marked illustration of the development of syphilis in three generations. In the first, active syphilis; in the second, virulent hereditary syphilis; and, in the third, a dyscrasic condition attended with well-marked dystrophic changes.—*New York Medical Journal*, Feb. 3, 1906.

**The Etiology of Eczema.**—McGUIRE does not believe that gout, rheumatism, and many other of the diseases referred to as factors predisposing

to eczema, have anything whatever to do, either with causing the disease, or in influencing it in any way after it has been established, only so far as any "run-down condition" of the general system makes the cuticle less resistant to irritation. As to heredity, although no child was ever born with eczema, many have a vulnerable skin, and may later develop the disease under favorable circumstances. The consensus of opinion holds that the disease is neither contagious nor auto-inoculable. However, the parasitic theory is growing, even in the minds of those who formerly opposed it. It cannot be denied that some individuals have an idiosyncrasy, a susceptibility of the cuticle to develop different forms of inflammation, varying according to the nature of the irritant. Want of cleanliness alone will not cause any form of inflammation upon a normal skin. As a rule, water is poisonous to an eczematous skin and should be avoided as much as possible during a period of acute inflammation. Soap makes the cuticle more sensitive, by thinning the outer layer and depriving it of its natural oiliness. The writer declares that in his opinion, some time in the near future the term eczema will be limited to that form of cutaneous disease that is caused by some specific parasite acting upon a vulnerable skin. He then cites a case, the only one which he can recall in which the tendency to the disease appeared to be distinctly transmitted to the offspring. Two cases of so-called "reflex eczema" are then described. In one of these cases the prepuce was very long and the writer advised circumcision. The child was entirely relieved soon after the operation had been performed. The history of several patients suffering from typical neurotic eczema is given. McGUIRE finds that in private practice children under the age of six, affected with eczema are particularly robust, strong, and healthy. Improper food in the majority of these cases is the only cause of this disease which he has been able to find. In public practice these patients are usually weak, anemic and "strumous." The reason for this difference between the two classes does not seem to be known.—*Medical Record*, Feb. 24, 1906.



## ORTHOPEDIC SURGERY.

Conducted by

WILLIAM E. BLODGETT, M. D.

**Decollement de l'Epiphyse Inferieure du Radius. Etat du Radius Vingt Ans Apres.**—A boy of nine fell, and was believed to have fractured the lower end of his right radius. Twenty years later, radiographs showed that the epiphysis had been separated. The right radius was 7 c. m. shorter than the left, and showed trophic changes. On the anterior surface of the radius at the carpal end was an exostosis of considerable size. The lower end of the ulna was half way down the side of the carpus, opposite the cuboid, which was turned so that its long axis was parallel with the axis of the arm. Three excellent radiographs are appended—(Walter, *Revue d'Orthopédie*, Sept., 1905, VI., 5 p. 385.)

**Hanche a Ressort. Ressaut Fessler-trochanterien.**—Case reported in which flexion or extension of the right thigh produced an audible and palpable snap over the great trochanter. Examination was entirely negative. Exploratory incision failed to show anything abnormal, such as bursitis, or undue extension or thickening of the trochanter or anterior border of the gluteus maximus. It was seen that the snap was made by the slipping of the trochanter under, and out from under, the gluteus maximus, and elevation of the anterior border of the muscle was found to prevent the snap. It is suggested that this functional anomaly may have arisen from the patient's manifest effort to simulate disease, although attempts to reproduce the condition in other individuals, both by voluntary efforts and with the aid of faradic stimulation of the anterior part of the gluteus maximus, were failures.—(Ferreton, *Revue d'Orthopédie*, Jan., 1905, VI., 1, p. 45.)

**The Study of the Clinical Course of Joint Tuberculosis by Means of the X-Rays.**—This article is a series of case-reports and excellent radiographs to support the author's proposition that the X-rays are of indispensable usefulness not only in the initial diagnosis but also in the progress of the joint disease as a guide to treatment, because the kind and duration of treatment of joint tuberculosis should depend upon the course of the disease in the individual case, and because accurate and frequent radiography furnishes trustworthy evidence that will verify, or often anticipate and correct clinical indications. The orthopedist, therefore, should have at constant command this means of joint examination. Loss of distinctness of articular bone-contour, and bone atrophy often at a distance from the joint, are especially referred to as marking radiographically the progress of joint tuberculosis.—(Albert H. Freiberg, *International Clinic*, IV., Fifteenth Series, 1906, p. 139.)

**Achillotomy and Fasciotomy in a Patient Seventy-two Years Old.**—The tendo Achillis was divided under local anaesthesia for the relief

of a mild degree of club-foot that had resulted from infantile paralysis and had caused an ulcerating callus on the outer side of the front of the sole. The foot was held in over correction by plaster of paris bandage for three weeks, during which time the patient walked with crutches and bore his weight on both feet as usual. Then the foot was strapped with adhesive plaster, as for a sprained ankle. Within a week after removal of the plaster, the patient was walking very well without crutches, and, with the aid of an ointment of 15 grains salicylic acid to the ounce of zinc oxide ointment, the callus had entirely disappeared. The case is reported to show that old age, unless diseased beyond the usual, does not contra-indicate tenotomies or other such proceedings, and does not retard repair. This was further brought out in the discussion by reference to a patient seventy-five years old whose hamstrings had been tenotomized for contracture of the knee so severe that the heel touched the buttock. The result was good.—(A. R. Shands, *American Jour. Orthopedic Surg.*, Oct. 1905, III., 2, p. 175.)

**More Rapid Correction of Lateral Curvature of the Spine.**—For cases of scoliosis in which structural changes are present, i. e., cases that cannot at first be actively or passively nearly straightened, the author advocates application of successive plaster jackets with the patient lying on a "hammock" within a gaspipe frame. The shoulders are held back by two webbing straps running the length of the frame, traction is applied to feet and head, and strong corrective lateral pull is exerted on the summits of the convexities of the dorsal and lumbar curves. (Corrective force may be applied also to the rotary deformity by a weight attached to one side of the frame and allowed to hang down over the backward rotation, usually the right mid-dorsal region.) From four to eight of these jackets are applied, one every three or four weeks, with increasing degrees of correction. At the end of the series, the spine is much more straightenable passively, but the muscles require training and strengthening in order to maintain the straightened position. During this muscle training, a removable, retentive apparatus is required, as, for instance, a stiff leather jacket. The particular point, in the article is the use of shoulder straps incorporated in the plaster jackets to hold the shoulders back, so that the part of the jacket over the upper front chest can be cut out, thus allowing free thoracic respiration, an important consideration in a series of unremovable jackets, both for the spinal deformity and for the general health of these scoliotics, who not infrequently lack vigor.—Walter Truslow, *Brooklyn Med. Jour.*, Dec. 1905, XIX., 12, p. 445.)

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## Original Articles

### MILK BACTERIA.\*

CHARLES E. MARSHALL, PH. D.

Professor of Bacteriology and Hygiene, Michigan  
Agricultural College,

Lansing.

The bacteria usually found in milk resolve themselves into several classes for consideration: (1) Those concerned in pathologic processes; (2) those capable of producing toxins in the body of the animal, and which find their way eventually by secretion into the milk; (3) those capable of producing toxins directly by growth in the udder milk; (4) those which cause the degradation of milk and perhaps produce toxic substance either through nutritive acts or by cleavage; (5) those which deal expressly with the well known milk fermentations. When, therefore, milk is to be estimated from the bacteriologic standpoint, it is always desirable to designate what phases of the milk-question are to be considered; for, on the one hand, the pathogenic bacteria are greatly concerned with the sanitary aspect of milk, while on the other hand, the ordinary fermentations have little sanitary significance.

As an illustration of pathogenic germs found in milk, that which is most commonly met and which is best known is the tubercle bacillus. While you, as

physicians, are thoroughly familiar with the pathologic processes of tuberculosis in man, there are certain features of this disease which perhaps are foreign to your practice. That this disease is common among milch cows in all countries of the civilized world, statistics demonstrate. In some countries, fully 30 or 40 per cent. of the milch cows are affected with tuberculosis. In new countries, however, it is not so widely disseminated; especially are the grade and native stocks quite free from any tuberculous lesions. If blooded animals are imported, it is with the result that tuberculosis is likewise introduced. Should we take a country where tuberculosis is prevalent to the extent of 30 or 40 per cent. among the milch cows, it is easily discovered that it would be a great hardship to the country if all these animals were subjected to slaughter. After considerable work and experience with this disease among cattle, many of our most prominent scientists have reached the conclusion that the tubercle bacilli seldom enter the milk, unless the udder of the animal possesses tuberculous lesions; in such a case, the animal is recommended for slaughter. Another precau-

\*Read before the Ingham County Medical Society, January 11, 1906.

tionary step has been taken, in some instances, by compelling all milk designed for public consumption to be pasteurized before use. With these two delimiting acts controlling tuberculosis, it becomes possible to check in large part, for the time being, at least, the transmission of the disease to man, while under these controlling acts, in the meantime, slow but steady progress is also made by substituting sound young stock for the old tuberculous animals. In the future, by this method, it is hoped that tuberculosis will be completely eradicated from the contry. Looking upon this subject in this practical light, not only must the sanitarian obtain considerable comfort, but, at the same time, those men who own the stock, who own the dairies, who, in other words, are financially interested, are seeing the economic force of the policy.

Again, Koch, not many years ago, as you are aware, stated that he did not believe bovine tuberculosis is transmissible to man. While at the time of his statement, the evidence was perhaps meager, at the present time, so many facts have accumulated, founded upon experimental data, that one unprejudiced cannot help drawing the conclusion that a certain relationship exists between bovine and human tuberculosis. Not only is bovine tuberculosis transmissible to man, but human tuberculosis is transmissible to cattle. In reviewing the literature on this matter, however, one is necessarily struck with the weakness of the germ when transmitted from its native soil or its native tissues to a foreign soil or foreign tissues; that is, if the human tubercle bacilli are conveyed from man to the bovine species, they do not excite as viru-

lent a type of the disease as if the bovine tubercle bacilli were employed upon the bovine species. This, however, would be a natural conclusion, because it is a well established fact that when any organic type is transferred from its native soil or its native environments to a foreign soil or foreign environments, that type undergoes a certain amount of change. It is well known, too, that if certain bacteria are transmitted from one species of animals to another, their virulence will either be increased or decreased, depending upon the natural susceptibility, or natural immunity of the animal. It must follow, therefore, that the tubercle bacillus falls in line with a general conception of pathogenic bacteria. We are probably safe in looking upon the bacillus from the bovine species as capable of inducing tuberculosis in the human species.

One other question arises in connection with a disease of this kind. Are we likely to meet with tubercle bacilli in the milk which is usually distributed about our cities? Our answer to the question must be conditional. If the milk of the city comes from grade or native animals, the danger is greatly increased. We cannot be certain that there is no tuberculosis either with native, grade or blooded stock, unless the animals furnishing the milk are subjected to the tuberculin test, and in using this test there is little good unless it is consistently pursued. It is an encouraging fact that stock growers are beginning to realize the economic importance of the tuberculin test and are employing it honestly and fairly. In time, the test will probably become a common practice.

There are a number of other pathogenic organisms, besides the tubercle bacillus, which are transmissible from cattle to



man, but none of them is so well established in its relation to transmissibility and so well known as the one just discussed. It is an easy matter to designate septic fevers, anthrax, rabies, tetanus, and other diseases as causing disturbances in the secretion of milk, but none of these diseases has been sufficiently traced to warrant us in being too positive in our statements. They, however, indicate what has already been referred to—the presence of toxins formed in the body and secreted in the milk or produced directly in the milk supply. There are those who believe that rabies may be transmitted through the milk, and, again, those who have suspected that the toxins of tetanus find their way into the milk and are capable of producing many of the subjective symptoms peculiar to the disease. The micro-organism which causes rabies is not known to us. That which causes tetanus is well known. It is also well established that the products of the tetanus germ may produce a typical form of tetanus, at least its subjective symptomatology, as well as the germ itself. This agrees with our general conception of pathogenic germ life; that is, that the symptoms, and perhaps the pathologic processes are due to the secretion of some poison by the micro-organism concerned. It is possible, therefore, to conceive that the tetanus germ, developing at the point of inoculation or in some wound, may give rise to its toxins which find their way eventually into the secreted milk. When it becomes possible to isolate toxins and to demonstrate their presence, these facts will grow clearer. At the present time, we must satisfy ourselves with those physiologic tests which have become known through recent research. I refer to agglutinative, bacterio-

lytic, and similar tests which are capable of demonstrating a direct relationship by means of the animal body between the germ and its products. Such evidence as this is available and suggestive, but must be considered in a tentative stage.

Besides such diseases as rabies and tetanus being associated with the production of toxins, perhaps we may gather from another class of micro-organisms evidence which will appeal more to the practitioner. Streptococci are known to frequently invade the udder of a cow, and give rise to leucocytosis and perhaps to inflammation of the udder. Inasmuch as these streptococci have been associated with epidemics of a scarlatinal nature, epidemics which have been confused with diphtheria, epidemics of gastro-enteritis, there may be good ground for assuming that in the presence of streptococci in the udder of a cow, the milk may contain not only pus cells in large numbers, but toxins or toxic products. So much stress has been placed upon the presence of streptococci in milk and the development of leucocytosis, that for the last two or three years means have been devised for counting the pus cells present in milk and making this test one of importance in the determination of purity. Since, however, leucocytosis may be produced in various ways, and also since it is subject to such great variation, it is very difficult to say what constitutes pure milk from this standpoint. The evidence gained from its study, however, should be associated with other results, obtained from other well known tests.

The most important features in connection with streptococci may be summed up by saying that they usually suggest danger. They especially suggest inflammatory conditions of the udder, and may

possibly give rise to epidemics of very well defined types. The determination of the number of leucocytes in the milk enables one to draw some conclusion concerning the extent of leucocytosis, likewise measuring, perhaps, some abnormal conditions which exist in the udder of the cow.

We come now to a study of bacterial degradation of milk. Years ago, we were taught that milk coming from the udder of the cow is sterile; but to-day we are taught that there may be anywhere from 0 to 50,000 germs per c. cm. in the milk of the udder. Formerly, the germs present were not taken into consideration for various reasons: (1) because they did not change the milk; (2) because it was suspected that if any contamination occurred, it occurred through the securing of the milk from the udder; (3) because the technical methods years ago were not so well developed as at the present time. It is not strange, therefore, that, in recent years, such workers as Moore, Ward, Harrison and Freudenreich, in opening the udders of cows and in taking the milk direct, found not only large numbers of germs present, but some of these germs corresponded very closely to some of the types present in the fifth about the cow.

Among the first determinations of this kind, Moore and Ward traced a gas producing germ to a dairy, then to a single animal, and finally to the milk of the udder of that animal. In this case, it seemed to be associated with septic processes going on in the cow. More recent work has demonstrated, however, that there are several species present and among them, in large numbers, are the lactic germs.

Bacteria do not seem to develop well

in the udder, as has been shown by Russell and Hastings, but eventually die out. Two reasons may be assigned for this: First, that the milk secreted, or the tissues themselves, act in a germicidal capacity; second, that the milk is not necessarily, as it exists in the udder, a suitable medium for the development of bacteria, as has been suggested by Stocking of Connecticut. It is doubtless true that occasionally germs find their way into the udder, and are capable of developing in a fair manner. Some of them doubtless give rise to garget, an inflammatory process in which are found quantities of pus, as well as fibrinous material and bacteria. It has been my personal experience, in cases of garget, to meet with streptococci. Not infrequently, however, garget may be traced to other micro-organisms, may be caused by the udder resting upon a cold floor, by injury, and by other agents. While there is very much literature concerning germ life as it exists in the udder of a cow, and while one might suspect that these germs present might do extensive mischief, yet it is a fact that when it comes to the practical handling of milk, they seem to play an unimportant rôle.

Milk drawn from the udder of a cow may contain a definite number of germs,—averaging about 3,000 germs c. cm., but upon standing, the number usually diminishes during the first twelve to twenty-four hours; it then increases. The increase is very rapid, and the milk is changed in one way or another. When we speak of the degradation of milk, we refer largely to the destruction of the proteid material. Few germs, so far as we know, act upon the butter fat, when it is free from nitrogenous matter. Casein and albumin break up through the action of bacteria. Their complex molecular

structures give way to simpler combinations. Step by step they are reduced to simple compounds, such as ammonia, amido compounds, carbon dioxide, water, etc. In the course of this change, products are sometimes formed which are toxic in nature. They may arise from the nutritive activities of the micro-organism, or through some cleavage process. About all that can be said is that they exist; accordingly, we have them to contend with. They have appealed to us in the past only when they possessed toxic properties. Probably many of these products give rise to the gastro-intestinal disturbances of children. They cause mucous or choleraic diarrhea, through some irritative process. The germs which are concerned are those which are sometimes in the udder, but most commonly those which get into the milk during or after the process of milking. These latter doubtless play some important rôle in rendering milk unwholesome for infant feeding. We may also consider them as closely allied to the well known specific fermentations of milk, which may be designated as due to those germs capable of digesting proteid substances of milk in a peptic or tryptic manner, sometimes yielding acid products, sometimes alkaline products; to those germs that curdle milk under alkaline conditions and sometimes slightly acid conditions (here let me say that sometimes the products resulting from degradation are capable of curdling milk as a rennet enzyme); further, to those germs which are capable of producing ropy milk, stringy milk, usually through the destruction of the constituents of the milk,—the milk sugar, and the proteid material; to those germs which, by means of their products are capable of giving rise to tainted milk (tainted milk

may be described as any milk which is abnormal in aroma or in flavor); to those germs which give rise to pigment,—blue, red, yellow; to those germs which produce gas in abundance; to those germs which give rise to alcoholic fermentation; and to those, finally, which produce lactic acid—these changes are the well known fermentations of milk. It has been our privilege to demonstrate that some of the germs which cause degradation in milk, long before they show evidences of themselves, are capable of producing substances which may be detected by their facilitating the growth of the lactic group. In other words, lactic germs in a pure culture, in milk, do not develop as rapidly as where some of these associative degradative bacteria grow with them, for it is through their products that the lactic group receives much of its impetus. This may be shown in another way by following up a sample of milk for some time. Very few, if any, lactic germs will be found, until after a period of several hours, then they begin to appear and increase at a very rapid rate. The degradative germs usually increase from the start. Whatever significance, therefore, the products resulting from the proteolysis of milk may have in the facilitation of the souring of milk, if they are in any way connected with this souring of milk, it is fair to surmise that they may exist in sufficient quantities to cause mischief in the bodies of infants.

We cannot pass from this subject without contrasting it or associating it with some physiologic disturbances which may lead to abnormal milk. We must not be led to believe that all abnormal milks are due to bacteria. Your own experiences in practice have demonstrated to you that there are many physiologic factors caus-



ing abnormal milk. You know the influence of fear, of melancholia or grief, upon the digestion and likewise upon the production of milk. What is true in the human is likewise true in the bovine species. Many of these indeterminable, intangible factors play some important part in milk, concerning which we may only speculate; at the same time, we feel well satisfied that there is some connection existing besides these conditions and abnormal milk. It is claimed by some that such mineral substances as arsenic, lead, iodine, tartar emetic, carbolic acid, and such organic compounds as opium, morphine, salicylic acid, and croton oil, are capable of altering the milk, changing it from a normal to an abnormal condition through some physiologic process. It is well known that many of the foods which cows eat, such as ensilage, turnips, beets, potatoes, corn, and grass, probably through aromatic organic compounds, alter the flavor of the milk very perceptibly, and poisonous foods are capable of rendering the milk poisonous, as, for instance white snake root, poison ivy, and mushrooms. Again, there is good evidence at hand which seems to indicate that putrefying animal matter will, at times, produce poisonous milk and that venomous poisons may give rise to poisonous milk. These facts must be always considered in connection with changes which may be brought about by micro-organisms.

In controlling germ life in milk, we either must keep micro-organisms out of the milk, or we must render them inert. By keeping micro-organisms out of the milk, it is possible to produce what is known as a pure milk. If we allow the micro-organisms to enter and then try to reduce the numbers, we must resort to pasteurization or sterilization to control

them. If the germs are kept out, the milk cooled at once, and kept cool, it will be wholesome for three or four days. If the germs are allowed to enter, they manufacture their products, the milk is then pasteurized, cooled, and kept cold, to last no longer than the pure milk. At the same time, pasteurized milk possesses products which may be toxic or non-toxic, depending upon the micro-organisms present. The pasteurizing temperature may, at times, destroy the poisonous products, according as the products are stable or unstable to heat.

The key to the situation, therefore, is *to have sound cows, keep them clean, milk only under cleanly conditions, and keep the milk cool until consumed*, if these milk bacteria are to be held in subjection. The ordinary inspection means but little. It is true that it is better than no inspection. What does our ordinary inspection amount to in the matter of tuberculosis, inflammatory conditions of the udder, the presence of diseases which might be detected in the udder, of communicable diseases which may exist on the premises, in the detection of germ products in the milk, developing after the milk has left the udder? We gain, by our present inspection, some knowledge as to the filth of the stable, the lighting of the stable, the water supply, the determination of pure food. Even these things are carried out in a very slipshod manner.

In 1903, in the city of Lansing there were consumed 1,000 gallons of milk per day, or about .49 of one pint per capita. Besides this amount, 100 gallons of skimmed milk and 25 gallons of cream were consumed. With 360 days in the year, the amount would run up to 360,000 gallons of milk, 36,000 gallons of skimmed milk, and 9,000 gallons of cream. During the year there were forty-one samples of milk tested by the lactometer and Babcock test. Four samples were examined for tubercle bacilli. All the city herds

and all the dairy farms were inspected—it is not designated how many times. The milk was brought to the city of Lansing from forty-five dairy farms, the longest haul being four miles. What I wish to speak of is this: These dairies were probably inspected, or rather visited, once or twice during the year. Forty-one samples only of milk were analyzed for butter fat. Remember there were forty-five dairy farms besides three herds within the city limits. It is clear, therefore, that not even all of the dairy producing herds were tested for the butter fat, while only four samples of milk were tested microscopically for tubercle bacilli. I speak of Lansing, not because it is much worse than other cities, but because you are familiar with Lansing, know her conditions, and because Lansing is only representative of a large number of other cities. This report also adds that the sum of \$900 is expended annually in the supervision of the milk supply, one official giving his entire time to this work.

One conclusion only can be drawn from evidence of this character, and it is that our ordinary inspection avails little in the control of the germ life of our dairies, and especially in reaching those abnormal conditions which so commonly exist and which doubtless cause far more mischief than any amount of butter fat present in the milk. While I present this matter of inspection and the extent to which it reaches, I would fall short of my duty if I did not speak of the producer's side, rendering justice to him at whom the law is usually directed, and who is usually no more guilty than the consumer. The city consumer, knowing little of what it means to produce milk, and especially to produce it in its purest form, can scarcely appreciate the cost of production. A farmer who will attempt, at the present prices of feed and the cost of help, to produce milk for less than six cents per quart, delivered in the city of Lansing, cannot in the slightest degree be a business man. Milk produced at three cents a quart in the ordinary way will pay,—this at wholesale. The quality of

the milk can be quite fair. It should cost 100 per cent. to distribute it and retail in the city, making the cost to the city consumer six cents per quart. If an unusually clean milk is wanted, you must expect to pay higher prices and pay in proportion to the amount of attention you wish given it. Because the farmers are not organized to meet the demands of city consumers and city sanitary inspectors, they frequently have put upon them yokes which they cannot well bear. The part of a milk inspector should not be simply to enforce the law; he should not enter upon his office for a single year; he should not undertake the duties unless he is properly prepared from the sanitary standpoint and also from the standpoint of the milk producer; he should know what it costs to produce milk; he should be acquainted with different grades of milk; in short, he should know milk scientifically and practically from the standpoint of the producer and the standpoint of the consumer. With this knowledge, he should aim, not in one year, but year after year, to build up herds about the city and surrounding country, which will provide either milk of one grade or milk of several grades, just as the demand may require. This is possible, and it is only by this means that the city milk will be improved, for you cannot go through the country and take the milk of A, B, C and D and so on down, indiscriminately and have good milk. You must pick your men, men who are capable of producing good milk, and encourage them in building up a milk producing plant, giving every assistance that is possible and at the same time protecting the consumers from any injustice or fraud. To build up these milk supplies will require conservatism and energetic action, year in and

year out, for a series of years. After a decade, there will be results which will be highly gratifying. On the other hand, if conditions continue as they have continued in the past, milk inspectors changed each year, usually incompetent,

no encouragement given the milk producer except the enforcement of law, ten years hence we shall have the same conditions that we have now, and our milk will be no better fifty years hence than it is now.

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## INTESTINAL OBSTRUCTION AND PARALYSIS OF THE BOWELS FOLLOWING LAPAROTOMY.\*

BY F. J. W. MAGUIRE, M. D.  
Detroit.

In bringing this question of Intestinal Obstruction and Paralysis of the Bowels before this meeting, I realize it to be the most perplexing subject which confronts the abdominal surgeon today.

From my own experience and after corresponding on the subject with some of the ablest abdominal surgeons in this country, as to their experience, I feel that the question of Intestinal Paralysis and Bowel Obstruction following Laparotomy is one of the gravest. I think there is hardly a man doing abdominal surgery who has not had, at some time or other, patients die from what he thought was obstruction of the bowels, and who has not given attention to the possibility of paralysis.

During the past ten years, both following my own operations and in consultations with other surgeons, I have seen ten cases. My attention was first drawn to this complication after a post-mortem on a patient, aged 29 years, whom I supposed had died of intestinal obstruction (ileus). To my surprise, after a careful autopsy, I found neither obstruction, angulation, or adhesions, but that death was

due to a paralysis of the bowels. In this case, I had done a ventro-suspension, and apparently the patient did well, until the fifth day, when suddenly her pulse ran up from normal to 140, with no fever, either by mouth or per rectum. I used all the ordinary remedies, without result. The patient died on the evening of the sixth day, about nineteen hours after these sudden symptoms.

The second case was a man of 42 years, whom I saw in consultation with Dr. H. O. Walker. He had been operated on for appendicitis. On the fourth day following the operation, which apparently up to that time was successful, he suddenly developed the following symptoms: pulse became rapid, the rectal temperature was 102, the respirations 50, and there was extreme nervousness. There had been no movement of the bowels since operation, notwithstanding we had used all means at our disposal. He was perfectly conscious up to the moment of death, which occurred on the seventh day. Our diagnosis in this case was paralysis of the bowels, no doubt due to sepsis.

The third case was following an operation for single ovariectomy, ventro-suspension.

\*Read at the Petoskey meeting of the Michigan State Medical Society, June, 1906.



sion, trachelorrhaphy and perineorrhaphy, all of which occupied an hour and seven minutes. The patient's temperature and pulse were normal until the third day, when suddenly she began to complain of being extremely nervous. Her pulse ran up to 130, there was no fever by mouth, axilla or rectum, no distension of the bowels or tenderness. She died on the sixth day following operation. I was unable to perform an autopsy in this case, but feel satisfied that the patient died from a paralysis, due to an irritation of the sympathetic nerves.

After the death of the last mentioned patient, I thought it was time to investigate this deplorable complication, which attacks our patients with the suddenness of a clap of thunder from a clear sky, so I corresponded with some of the leading surgeons in the country, all of whom informed me they had had like experiences.

I shall first quote Dr. Nicholas Senn to whom, more than any other American writer, we are indebted for light on this subject:

"It is important to differentiate, as early as possible, between the mechanical and dynamic obstruction—in other words, to separate the cases into mechanical and surgical; for the surgeon, it is imperative that he should know the nature and location of the mechanical obstruction before he resorts to the knife. While the different pathologic forms of chronic and acute obstruction present many features in common, the clinical picture is usually materially modified by the anatomic location of the obstruction, and certainly, when this location can be determined before the abdomen is opened, the surgeon is better prepared to outline, before hand, the operative treatment that is to be pursued. The experience of Curschmann, Naunyn, Goltdammer and other distinguished physicians seem to have shown that about one-third of all cases of intestinal obstruction will recover under rational internal treatment and these are the cases that, with few exceptions, are due to dynamic causes. It seems, then, that about one case in three has a chance

of recovery, without operation, under medical treatment. Dynamic obstruction (by weight of authority) is due most frequently to peritonitis, next in frequency, to reflex intestinal paralysis, and, finally, to intestinal spasm—enterospasm.

"It is not always easy or possible to differentiate between dynamic and mechanical obstruction; there are, however, certain symptoms that are very significant of each and which must be studied with the greatest care. Peritonitis is characterized by diffuse tympanites, tenderness, fever, and rapid, wiry pulse. Fever is not constantly present in peritonitis, as in the gravest forms, the temperature is not infrequently subnormal. Vomiting, so constant a symptom in both mechanical and dynamic forms of obstruction, often becomes fecal in peritonitis, when the inflammation and the adhesions of the intestinal wall result in dynamic obstruction.

"Dynamic obstruction due to intestinal paralysis, without inflammation, is of a rare occurrence, and its nature is as yet very imperfectly known. It is probable that some of the cases of intestinal obstruction after laparotomy have such an origin. Heidenhain reports from the Greifswald clinic, three cases of enterospasm out of thirty cases of intestinal obstruction. All recovered. In one case, laparotomy was performed, but no obstruction was found. In all the cases the existence of a local irritation was considered as the cause of the localized spasm. He refers to similar cases in the practice of James Isreal and Korte. In all cases of obstruction due to enterospasm or paralysis without inflammation, the constitutional symptoms were not severe, a clinical feature of great importance as compared with mechanical obstruction or obstruction due to inflammation. No surgeon questions the fact that, in very rare cases, a slight invagination or volvulus is corrected spontaneously or by rectal inflation, but these cases, to say the least, are exceptional. We are, therefore, forced to consider that all cases of mechanical obstruction are surgical affections from the very beginning, and must be treated as such within 24 to 48 hours, if the patient is to receive the benefits from an early operation to which he is entitled. Irregularity of the contour of the abdomen, localized tympanites and resistance, absolute interception of gas and fecal vomiting are some of the symptoms most relied upon in differentiating mechanical from dynamic obstruction. The pulse, at first, is but little affected. In volvulus, the pulse has been infrequently reduced to less than sixty (Heidenhain). Fecal vomiting is seen not infrequently during the later stages of peritonitis. Arrest of intestinal contents is often incomplete in invagina-

tion. Visible or palpable peristalsis is more constant in obstruction from obturation, strictures, twists, impaction from tumors and foreign bodies or obstruction from compression.

"The clinical symptoms most characteristic of strangulation obstruction, volvulus, band constriction, internal hernia, and invagination are appreciable asymmetry of the abdominal wall, and the calized resistance, paresis of the strangulated loop, lying against the abdominal wall, and the absence of stormy peristalsis. The clinical history is of much import in searching for the nature and location of the obstruction. Age, sex, antecedent abdominal affection, previous condition of the fecal discharge, and the general physique of the patient must all be taken into careful consideration, before the symptoms, presented at the bedside, are analyzed and classified.

"The weak side of intestinal surgery today is the uncertainty of diagnosis; the surgeon must often shoulder the responsibility, imposed upon him by the present status of modern aseptic surgery, of seeking light in doubtful cases by resorting to an exploratory incision, and then acting in accordance with what is revealed by inspection and palpation."

Dr. Howard Kelly, of Baltimore, suggests as his reason for the frequency of this post-operative complication, traumatism of the field of operation, also to the fact that there is too common a use of morphine following operation.

TREATMENT. When I am in doubt as to whether the patient is suffering from mechanical obstruction or paralysis, I always treat first for the paralysis; if this fails, it has been my practice to then reopen the abdomen and look for the obstruction. It is my custom now never to make a favorable prognosis after laparotomy until after the bowels have moved. If the stomach is not too much disturbed after the operation, I order 1/10 gr. doses of calomel every one-half hour until 2 grs. are given, this is followed by teaspoonful doses of magnesium sulphate, every one-half hour, until one ounce is given. If this is not effective, I order a simple enema; should this not act imme-

diately. I begin giving subcutaneous injections of atropine sulphate, every three hours until bowels move or toxic symptoms begin to appear. This routine of treatment I have found successful in two cases, which I quote.

Mrs. C., aged 45 years, operated by abdominal hysterectomy for two large ovarian cysts. Notwithstanding the ordinary routine treatment, the patient's bowels failed to move up to the fifth day and she began to develop the symptoms already described in the cases before cited. I resorted to the treatment recommended by the Germans, of administering atropine in 1/100 of a grain doses, every three hours, until I noticed the beginning of toxic effects. The bowels moved on the fifth day and patient became less nervous and gradually convalesced, but was still very constipated, a condition that did not exist before operation. I feel I saved this patient by the timely use of atropine.

The fifth case was a patient 23 years old, who was referred to me by Dr. J. F. O'Keefe, and on whom I operated for appendicitis. Four days after operation there was no movement of the bowels, notwithstanding the usual treatment. I had again recourse to subcutaneous injections of atropine; bowels moved on the sixth day, and the nervous symptoms subsided. He recovered, but is still more or less constipated. This is a recent case. Time will not permit me to dwell longer on cases in my own experience.

I will quote some cases reported in foreign medical journals. To Batsch, of Munich, we owe our present knowledge of the use of sulphate of atropine as a specific in bowel obstruction. Whatever its origin may be, it is not necessary to go into the physiologic action of atropine,

as its action on the bowels has long been known.

BATSCH (*Munchener medicinische Wochenschrift*) reports more cases similar to the ones he formerly reported. In three more cases, he gave atropine in large doses, 1/100 of a grain, many times daily; in two cases, it immediately brought about evacuation of the bowels. In one case, a woman 45 years old, the atropine did no good. This case immediately had a laparotomy, and the trouble was volvulus, bound down with parametric adhesions. After separating these and untwisting the volvulus, the patient made a complete recovery. It is of the utmost importance when you have a case of obstruction of the bowels, where a diagnosis can not be accurately made, before operative interference, that atropine should be given.

MARCINOWSKI (*Munchener medicinische Wochenschrift*). Since Batsch gave his paper on the treatment of obstruction of the bowels with large doses of atropine, I have used it many times. One case was without any known cause; in another case, the obstruction was due to strangulation from incarcerated hernia. Both of these patients made a full recovery. There were no bad symptoms, in the first case, there were only slight nervous manifestations.

DEMME (*Munchener medicinische Wochenschrift*). Two cases with pronounced obstruction of the bowel. In the first case, there was fecal vomiting, after washing out the stomach and high colon irrigation, there was no good result. An injection of atropine, 1/600 of a grain, was given without benefit; five hours later, 1/100 of a grain was given and in a short time there was a large free evacuation. The second case was one of fecal vomiting, and without bothering to wash out the stomach, an injection of 1/100 of a

grain of sulphate of atropine was given hypodermically, and in twenty minutes, the pain stopped, the vomiting ceased and in six hours there was a free evacuation of the bowel. Both patients made a full recovery.

HOLZ (*Munchener medicinische Wochenschrift*). A sixty-five year old woman suffered with obstruction of the bowel. In spite of cathartics and high injections, she did not seem to improve. It was found that she had a irreducible hernia, and a herniotomy was performed. The operation did not assist in the evacuation of the bowel and the patient began to get very weak. At this time 1/100 of a grain of atropine was injected. A quarter of an hour after the injection, the patient complained of intoxication symptoms, dry throat, dryness of the mouth, thirst, dizziness, nausea, etc. This continued to get worse until she had convulsions which continued until the next day, when they stopped. Twelve hours after the injection, the patient had a natural evacuation of the bowel without any bad feeling. Had it not been for the injection of atropine, the patient would have died, and atropine is recommended in all cases of obstruction of the bowel.

STRACK (*Munchener medicinsche Wochenschrift*). A case of obstruction of the bowel in which an injection of atropine was given. Four hours after the injection, gas and a free evacuation of the bowel followed. The only symptoms from the injection were thirst, palpitation of the heart and some dizziness.

A. Weber, of Germany, says: "Atropine should be used in every case of obstruction of the bowel, even volvulus, except incarceration. It is valuable after laparotomy, in obstruction, due to the accumulation of fecal matter, appendicitis, and scrotal hernia. Laparotomy is necessary when, in twenty-four hours, you do not have good results from atropine."

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## THE VALUE OF DRUGS USED TO ASSIST LABOR.\*

BY JAMES E. DAVIS, M. D.  
Detroit.

The classification of drugs used to assist labor admits of three divisions, respectively, those producing tetanic contraction of the uterine muscle such as ergot, *hydrastis canadensis*, cotton root, etc.;

those producing normal contraction, as kola, quinine, *cimicifuga*, glycerin, sugar, etc.; and those which act as general systemic tonics, stimulants, eliminatives, narcotics and anesthetics. If small doses



of the drugs belonging to class one are given, the result may show, in most instances, no tetanic contraction of the uterus.

The therapy of labor, if studied scientifically, must necessarily find a close relation to the physiologic process by which the female expels from her uterus and vagina the mature ovum at about 280 days after the first day of the last menstruation. Unfortunately, we do not comprehend, except in an indefinite way, the law of the organism. Doubtless we can, without question, accept the view that labor is due to a combination of conditions, no one of which can be analyzed and yield a sufficient and complete explanation of the process. Analogous studies of plant and insect life contribute much to our knowledge of the maturity of the ovum. The chrysalis of the papilio is literally packed in a narrow cell until mature, when a frothy liquor is disgorged for the purpose of dissolving the glutinous material which gives solidity to the chrysalis, and this at last yields to the efforts of the enclosed insect. This is a much simpler process than is observed in maturity of the human ovum, the chief factors of which are enumerated with considerable uncertainty. In drug therapy five of these factors are interesting considerations.

The first—increasing irritability, with intermittent contractions becoming steadily stronger, admits of supplemental aid from the drugs belonging to one or all three classes. Ergot and other drugs of the same physiologic type exhibit power, in full doses, to influence tetanic uterine contractions. All unstriped muscular fibers are stimulated. Hemmeter has

demonstrated that uterine contractions result from stimulation of the centers in the lumbar portion of the cord. When ergot is administered in small doses, ten minims or less, the effect is that of a stimulant to the normal intermittent contractions.

The drugs of the non-tetanic group produce a varying effect upon well established contractions: quinine, in doses of ten grains, fluid extract of kola, in thirty minim doses, sugar in one ounce doses, fluid extract of cimicifuga in one drachm doses—have resulted in a strengthening of the pains. It would be interesting to ascertain how this effect is obtained. Aside from the cardiac and circulatory stimulation, there may possibly be a stimulation of the uterine motor area in the medulla.

Changes in the decidua can be hastened by glycerine, when it is injected high up into the uterus, between the ovum and uterus. The effect of irritation and osmosis is also produced and labor is in most cases promptly established.

Relaxation of the cervix can be materially assisted, in fact sometimes compelled, by general anesthetics, and some workers have obtained good results from local treatment, using cocaine and belladonna. In cases where the upper segment is adequately large, and the *increasing tension of the muscular walls* is not marked, where the stronger fetal movements are not prominent, on account of increasing confined space, and where the lower segment remains stubbornly unrelaxed, here anesthesia, carried to the second stage, will compel or assist complete dilatation. The aid it renders to bimanual dilatation is well known to all obstetricians.

In the first stage of labor, there is not

\*Read before the Wayne County Medical Society, February 19, 1906.

infrequently a marked disproportion in the innervation of the upper and lower segments. A noticeable inertia obtains in the lower segment. This condition is frequently observed in neurotic patients, and prevails more often in labors beginning late in the afternoon or early morning. The physician is summoned usually between nine and twelve o'clock. Examination reveals several of the nine or ten causes of the onset of labor. There is increasing irritability, with strengthening intermittent contractions, increasing tension on fully developed muscular walls, stronger fetal movements in more confined space, menstrual periodicity, and an exciting cause of emotion.

By vaginal examination, one finds the lower segment without the slightest relaxation and the presenting part of the fetus does not exert any appreciable pressure at Bandl's ring. The therapeutic indication is best met with morphine or chloral. If the emotional symptoms prevail and pain is not strong enough to prevent sleep, ten or fifteen grains of chloral, given with eight ounces of hot milk, will enable the patient to sleep well until morning, when the lower segment will be found softened and dilated from the size of a quarter to larger than a dollar. The presenting part will have descended and be in position for further advance in the lower segment. A strong cup of coffee or any general stimulant, with exercise and a movement of the bowels, will suffice to establish good pains effective for delivery in from four to ten hours.

If pain and emotional symptoms are equally prominent, morphine and chloral are advantageously combined. In the majority of cases, this combination is preferable to morphine alone, as the im-

mediate effect is more complete and the gastro-intestinal sequelae less. The physiologic action of these drugs proceeds from the central nervous system, by direct sedative effect upon the cortical cells of the brain and from an effect upon the medulla, which controls important reflexes, related in some way to uterine action.

The value of general anesthetics, as a means of control, should be given due consideration in cases of labor which give evident proof of undue haste or precipitation, thereby endangering the integrity of the soft tissues. Transient anesthesia may be produced frequently enough to enable the accoucheur to guide and control the progress of the fetus, in such a way as to accomplish the best possible accommodation of the passenger to the canal.

The use of drugs to assist labor requires a good knowledge of the approximate time required for the desired physiologic effect, and this will, under certain circumstances, determine the particular drug or drugs selected. The general anesthetics and all drugs, administered by hypodermic injection, are expected to act in approximately five minutes. If given by mouth, ergot, quinine, and most other drugs of their class, manifest beginning effects in from 15 to 45 minutes, reaching full physiologic action in from one to four hours. There is a wide variance in the action of drugs given when labor is in progress; not only are the factors of absorption and elimination significant but the character of the labor, with the mental and nervous temperament, determine much as to the results obtained.

In considering drugs of class one, or those producing tonic contraction, the

weight of opinion, among obstetricians of large experience, is against their use until the uterus is empty, and the *post partum* use of these drugs is not within the scope of this paper. In a recent symposium in the *Therapeutic Gazette* of January 15, 1906, Davis, Cameron, Coles and Krusen advocate the routine use of ergot after completion of the third stage, but Hirst says: "it is my practice to give ergot as soon as the child's body escapes from the mother and I have not, in fifteen years of practice, seen any disadvantage from its use. My reason for so doing is that I had in the early part of my practice, some serious cases of *post partum* hemorrhage from relaxation of the uterus." The position taken by Dr. Hirst is a little peculiar. He gives ergot for its *post partum* effect, by mouth, as a routine practice, at the time of expulsion of the body.

It is well known that the placenta is expelled against the lower segment or even into the vagina, at the identical time that the child emerges from the vulva. Of what possible value can ergot, given per mouth, which requires fifteen minutes or more to produce contraction, be in such a case, if severe hemorrhage takes place and exsanguination is complete before the desired effect is obtained? If deep hypodermic injection into the thigh or buttock is done immediately upon expulsion of the placenta, the same result is obtained in one-third of the time and without danger of tonic contraction upon the placenta, which may separate slowly and with difficulty from the uterine attachment.

If Hirst had specified a dosage of ten minims, or less, of ergot, given every hour or two to assist in normal contraction of the small unstriped muscle fibres, there would not be danger of tonic contraction

during labor or dangerous relaxation at the end of the third stage.

It is important to remember that quinine, *cimicifuga* and like drugs should not be given in small doses, as the result will be lessened reflex activity. Ten grains of quinine, for example, should be administered early enough to secure the full effect.

A more thorough understanding of the therapeutic values of drugs, used to assist labor, will doubtless restrict their use. Labor is intended to be a normal process. The deviations met with are not due, in the majority of instances to abnormalities of the fetus and birth canal, but to abnormalities of the physical and mental systems as a whole. Increasing attention should be given to the hygiene of pregnancy. The environment of the patient, immediately preceding and during labor, should be one that begets confidence, control and passive submission.

The physician, when called to a patient in labor, should do much more than make a vaginal examination and palpate the abdomen. The whole patient must be examined and all requirements, contributing to the best possible physical and mental equipment, should be promptly met. Symptoms of acute indigestion should be immediately cared for by an adequate dose of one of the digestants. Gaseous distension of the bowels should be relieved by turpentine enemata. Acute cystitis, due to frequent urination, should be relieved by twenty or thirty minims of tincture of *hyoscyamus*.

A troublesome diarrhoea should be controlled by a single dose of opium or a rectal injection of *hamamelis*. A tonic, stimulant, eliminative, narcotic or whatever the general system requires, should be administered with the ultimate purpose of contributing to the success of nature's greatest operation.



## A CASE OF SUB-ACUTE PANCREATITIS, CHOLELITHIASIS AND CHOLECYSTITIS.

BY CHARLES FREDERICK TENNEY, M. D.

Assistant in Surgery, University of Michigan.

(From the Surgical Clinic of Dr. C. B. G.  
de Nancrede.)

This case seems of sufficient interest to report, because, as was suggested before and demonstrated at the time of operation, two conditions existed; one, gall bladder disease and the other, pancreatitis.

Mrs. C., aged 28 years, housewife, American. Has always resided in Michigan.

The family and past histories are negative, as regards previous diseases which might have any bearing on the present condition, with the exception of her habitual constipation.

She was taken ill on the 13th of September, 1905, with severe pains in the epigastrium, later radiating to the back and under both shoulder blades, more severe under the left, followed by nausea and vomiting.

This attack followed a week of worry and overwork, and occurred only twenty-two days after the birth of her youngest child. She was attended by her home physician, who controlled the condition with morphine. In a few days, she went about her housework, but still had pain, of a dull character, in the epigastrium. On the 18th of September, another attack came on quite similar to the first, only more severe, and vomiting continued for a longer period. There is no history of chill, fever or sweating in either of these attacks and no jaundice was noticed.

From this time until November 3, the patient was able to be about the house, but was never free from pain in the stomach region, and had occasional attacks of nausea, with eructations of gas and bitter fluid. On the third of November, she was again confined to her bed, and added to the symptoms of the previous attacks, was sweating and slight temperature. On November 11, the patient noticed that her skin and the whites of her eyes were yellow and that her urine had a very dark color.

From this time (November 11), until she en-

tered the hospital, on November 20, her stomach would not tolerate any amount of food. She could retain a few teaspoonsful of water or milk at a time, but this was not often. Pain was so severe at times that it would require  $\frac{1}{2}$  grain of morphia to relieve her.

On November 18, she was seen by Doctor Darling, in consultation with her home physician, and it was decided to send her to the University Hospital; she entered the Surgical Clinic November 20, at 3 p. m. Her condition two hours after entering was as follows:

A patient of average build; she was rather nervous and apprehensive. The skin over the entire body had a brownish tint, the sclerae were markedly yellow as were also the conjunctivae; mouth and lips were dry, tongue heavily coated; every few minutes, patient would have eructation of gas and a soap-suds like material was brought up. Temperature 98.6°, pulse 132, quality fair. Heart and lungs negative. Abdomen was symmetrical, except for a slight fulness above umbilicus. Pain in this region markedly increased by pressure. Some rigidity of right rectus. Blood examination: Red blood corpuscles 5,350,000, probably a concentration count, because of so little liquid having been taken. Leucocytes, 11,562. Hemoglobin, 90%. Urine—Sp. gr. 1030; dark color; no albumin, sugar or casts; bile reaction marked. Free fat in stools. Mayo Robson test doubtful.

The patient was put upon nutritious enemas every four hours and prepared for laparotomy. On the following morning, a cholecystostomy was performed by Doctors Darling and deNancrede. An incision, about nine centimeters long, was made to the right of the median line, in the region of the gall bladder, dividing the skin, the superficial fascia, and the sheath of the right rectus muscle, the fibres of which were parted; the posterior layer of the sheath was incised and the peritoneum was picked up and opened. Upon examination, the gall bladder was found somewhat distended; there were a few adhesions to the surrounding parts, which were separated. The

\*Read before the Clinical Society, at Ann Arbor, February, 1906.

pancreas was found to be markedly congested, the head and half of the body being from two to three times their natural size. No evidence of fat necrosis was seen.

The general cavity was packed off from the gall bladder, which was lifted into the wound by means of a silk ligature, passed through its fundus. An incision was made through its wall, and about two ounces of rather dark looking bile ran out. The stone scoop was introduced and a single stone about the size of a pea was found. A large probe was passed and the ducts found to be patent. A purse string suture of catgut was passed around the end of the gall bladder, a drainage tube was inserted and the purse string tied. The gauze packs were removed, a cigarette drain placed to one side of the gall bladder and the abdomen closed.

The patient's condition was such that at one time, during operation, strychnine, 1/30 gr., was given, and fifteen ounces of salt solution were injected under her right breast. She was put to bed, heat applied, and a coffee and whiskey enema given. For three days following operation, her condition was fairly good, the highest temperature being 99.8°, and pulse 120, but not of a good quality. As the eructations of gas and vomiting still continued, the nutritious enemata were kept up every four hours. These consisted of peptonized milk three ounces, saline three ounces, whiskey two drams, together with one egg. The stomach was washed at intervals, with only slightly beneficial results, the frothy mucus being constantly brought up.

On the beginning of the fourth day, the patient slept for one and one-half hours, the first sound sleep following operation; she awakened with a start and a feeling of nausea, and appeared dazed. Following this, her temperature went down to 97.2°, and pulse up to 130. She responded well to treatment and her condition improved. Twenty-four hours later, she had a similar attack, pulse going up to 148, very weak, and easily compressible. She was delirious; the nausea and vomiting still continued, and there was great pain in the epigastrium. During the next two days there were similar attacks, the pulse going up as high as 160 and hardly perceptible at the wrist. About 20 ounces of bile, in 24 hours, were drained from the gall bladder, and in this, were found clots of blood. Fresh blood, in large amounts, was always found when the dressings were changed. The red count had dropped to 1,220,000, and hemoglobin to 27%. Digitalin was alternated with strychnine, for a time; transfusions, and saline enemata were alternated with nutritious

enemata in which calcium lactate was given.

On the seventh day, the nausea and vomiting ceased, liquids were given by the mouth and cautiously increased, pain lessened gradually and her mind cleared. From this time on, the patient began to improve and made an uninterrupted recovery, with the exception of a parenchymatous mastitis, having nursed her child just previous to entering the hospital. She was discharged on the thirty-sixth day. The fistula had closed and the urine was normal. The blood examination, at this time, showed 3,600,000 red blood corpuscles, 10,000 leucocytes, and 70% of hemoglobin.

As pointed out by Deaver, in the *American Journal of Medical Sciences*, for February, 1903, previous to Classen's work in 1842, pancreatitis was discussed mostly from a theoretical standpoint.

Classen collected six fatal cases which he regarded as probable pancreatic disease; Fitz however questioned the diagnosis of these. Klebs, Frederick and Balsar published valuable contributions to the subject, and Balsar, in 1882, called attention to the presence of fat necrosis associated with pancreatic disease. Senn, in 1886, published his work on the surgery of the pancreas and advised palliative treatment in the early stages, and suggested surgical treatment in the suppurative and gangrenous forms. In 1900, Mayo Robson pointed out the surgical importance of chronic pancreatitis and called attention to the similarity which it bears to cancer of the pancreas. Many articles have appeared since then, and all agree that the cause of pancreatitis, other than direct trauma, is mechanical, chemical or bacterial, with the most evidence in favor of the mechanical.

As to the disease itself, it can be divided into acute, sub-acute or chronic forms. In the *Medical News* of September 9, 1905, Carl Beck calls attention to the fact that there is no one sign which is absolutely pathognomonic of pancre-

atitis. The acute form is characterized by the sudden onset of pain in the epigastrium, colicky in nature, accompanied by prostration and anxiety; vomiting is an early symptom and is severe. There is great tenderness in the epigastrium. Examination of the abdomen, reveals a tender swelling in the upper portion, tympanitic on percussion. Constipation develops and is so difficult to overcome that the diagnosis of acute intestinal obstruction has frequently been made. Collapse may rapidly follow, with distended rigid abdomen, small rapid pulse, irregular temperature, delirium and death. In these cases the pancreas is found to be the seat of an acute cellular or fibrinocellular infiltration of the connective tissue of the organ, with a more or less extensive necrosis of the lobules, and with diffuse hemorrhage into the organ. The differential diagnosis must be made from intestinal obstruction, cholecystitis, peritonitis, appendicitis and acute ptomaine poisoning. The sub-acute form will present the same symptoms, but to a lesser degree. The onset is more gradual, the pain less severe and the vomiting not so violent. Constipation may be followed by diarrhea. There is slight elevation of temperature and the mental depression is marked. The diagnosis of the chronic form is more difficult, because the onset is usually more gradual and painless. In some instances, the initial symptoms resemble those of gall stone attacks, with pain, vomiting and jaundice. The pain is more in the epigastrium however, and may be referred to the left shoulder blade. The greatest point of tenderness may be

found one inch above and one inch to the right of the umbilicus. When the induration of the head of the pancreas is sufficient to obstruct the bile duct, jaundice slowly deepens and becomes chronic.

Clinically, a stone lodged at the ampulla of Vater has caused penetration of bile into the pancreatic ducts, setting up an acute pancreatitis. Experimentally, the same results have been obtained by mechanically obstructing the duct at that point. The resultant condition may be any of the above described varieties of pancreatitis or it may go on still further, until suppuration or gangrene is produced.

This case, I think, was one of Cholelithiasis and Cholecystitis, with the sub-acute form of pancreatitis. The probable cause was either a stone lodged far down so as to obstruct the common duct, or pressure from the enlarged head of the pancreas, causing the flow of bile into the pancreas.

I think the treatment for all cases should be surgical, morphine and rectal feeding being employed until the above can be carried out. The hemorrhage, following the operation, was probably that which so often occurs in cases of long standing jaundice. The cause is a lessened power of coagulability of the blood, due to the action of the bile salts, these also destroy the red blood cells and attack the intima of the blood vessels, whose nutrition has suffered from the impoverished condition of the blood. Calcium chloride or calcium lactate is the best hemostatis to use.





## ENFORCEMENT OF THE MEDICAL PRACTICE LAW IN CALHOUN COUNTY.

H. A. POWERS, M. D.,  
Battle Creek.

The history of the effort to enforce the Medical Law in Calhoun County, especially in the city of Battle Creek, is of vital interest, not only to the physicians throughout the State of Michigan, but to the people of every community as well.

Some of the rankest fakes and frauds of unqualified pretenders of the healing art have been exposed and aired in court, and although no convictions have resulted, yet many of the fakirs have taken warning and fled to parts unknown. It might be of interest to ask, Where are they? One thing is certain, they must keep out of Calhoun County, as the machinery of the law is in good working order here and there is a determined effort on the part of the Calhoun County Medical Society to keep it working until the county is thoroughly purged of this class of pretenders.

The first step taken in this matter was about a year and a half ago, when it was found that some thirty persons, who were not registered, were doing business in the city of Battle Creek. Some of these were entitled to register, but for various reasons had failed to do so. Some of those entitled to be registered, when they were approached about the matter, complied cheerfully, others complied when they were told that unless they did, complaints would be made against them. Several complaints were made and some of the parties left town before the officers could serve the warrants; one was tried and the jury disagreed. Before he could be tried again, he died and that took him out of the jurisdiction of this court.

Another was tried and acquitted on a trumped up technicality of the law. The prosecuting attorney (who, by the way, is thoroughly in sympathy with the enforcement of the law) immediately found a way to get the *law* before the Supreme Court, where it was promptly upheld and an order issued for the rearrest of the party, but, in the meantime, he had fled, and so we were rid of one more.

These prosecutions before a justice court jury demonstrated two things: first, that these people were determined to fight their cause to the bitter end, they having retained seven of the best attorneys in the county; second, the difficulty of convicting them before a justice court jury, where no instructions are given a jury by the court. The prosecuting attorney has shown himself equal to the occasion and able to cope with the array of talent on the other side; he has carefully prepared his cases and presented them with such logical force and reasoning that many who were first opposed to him are now in sympathy with his movement. The Legislature, at the last session, removed the second defect by making these cases Circuit Court cases where the jury receives instructions from the judge, as to the law in the case.

One case only has been tried in the Circuit Court, and the jury stood eleven for conviction and one for acquittal. Just why this one voted to acquit after hearing the judge's charge to the jury is hard to comprehend. This was the case of *The People against Allan Raymond*.

The defendant claimed to cure *all* dis-

eases by reducing dislocated vertebrae; the question hinged wholly upon what constituted "the practice of medicine" under our statute. The judge's charge to the jury gives a good, sensible definition of the term "Practice of Medicine," and it is a definition which, I believe, will be upheld by the higher courts.

Although there has been no conviction, we have gotten rid of more than a dozen of these illegal practitioners. They have left Calhoun County and have probably gone to some other county, thinking they will not be disturbed. It is the duty of every citizen, especially every physician, in the state, to see that these people either quit business or qualify under the law, and I earnestly appeal to my fellow practitioners throughout the state to make a special effort to see that the law is complied with. If the dignity of the medical profession is to be upheld and maintained, it must be by the physicians themselves taking an active part in the enforcement of the law. It is true that the statute makes it the duty of the prosecuting attorneys to prosecute violations of the law; but if the physicians are lukewarm in the matter they cannot expect the officers to be very enthusiastic in its enforcement.

The following charge to the jury was delivered by **Judge W. H. North**, of the Circuit Court of Michigan:

THE CIRCUIT COURT FOR CALHOUN  
COUNTY.

The People

vs.

Allan Raymond,

**CHARGE OF THE COURT.**

Gentlemen of the Jury—At this time it becomes the duty of the court to state to you the law as applicable to this case, and I shall attempt to be as concise as is con-

sistent with clearness, in my attempt to do so.

It seems to me that in view of the fact that a stipulation has been entered into in this case to which your attention will be called later, and as counsel for the defendant have suggested, there is really only one question for your determination when you retire to your jury room. That one question is this: Do the acts of the defendant, as set forth in the stipulation filed by the parties here and as shown by the evidence in the case, bring him within the terms of the statute providing for the practice of medicine and surgery and the registration of those who are engaged in those professions? That is to say, the only duty you have to perform is to determine from the evidence in this case whether or not the defendant is practicing medicine within the provisions of this act.

Now, of course, gentlemen, in view of that being the question in this case, it is going to be necessary that you should have as definite an idea as the court is able to give to you of what constitutes the practice of medicine and surgery within the meaning of our statute, and later on in the course of this charge I shall attempt to give you a definite and fairly concise definition of what I believe, and of course you are to take, as the legal definition of the practice of medicine as within the contemplation of the statute under which this prosecution is being conducted.

As I have said to you before in other cases, I think, you are to take the law as given to you from the bench here by the court, and it does not matter what may be your own notions of what is or what is not the practice of medicine, it does not matter what counsel for the people or

counsel for defendant have indicated to you as being in their minds the practice of medicine, but rather it is for you, as jurors under your sworn duty and obligation, to take the legal definition as I shall attempt to give it to you and arrive at your results with that in your minds as the measure.

Now I think that it is my duty, in so much as this is the first criminal action that this panel of jurors has been called upon to try, to call your attention to one or two matters in which criminal practice and procedure and the rules of evidence differ from those of civil practice and procedure. One of the first things for you to remember is that a man is always presumed to be innocent of a criminal act with which he is charged until he is proven guilty. That is a very sacred right to any man that is brought before a court, and should be carefully borne in mind. Now that is what we call also an abiding presumption; that is to say, that that presumption is not alone with him at the beginning of the trial, but it goes with him all the way through even when you get to your jury room; your presumption should be that the defendant in this case is innocent, and that presumption should control in your mind until by competent evidence and such a measure of evidence as the court will instruct you is the proper measure, you are convinced that the defendant is guilty.

Now the burden of proof in this, as in all criminal matters, is always with the people. That burden of proof they assume at the beginning of the case, and they are supposed to carry it upon them, and that is simply another way of stating the proposition to you that the presumption of innocence always prevails in favor of the defendant; and not only do

the people in this case, the prosecution, assume the burden of proof, but it is upon them to convince you beyond a reasonable doubt that each and everything which is necessary to convict this defendant is proven beyond a reasonable doubt. That is, each feature of the offense of which he stands charged must be proven beyond a reasonable doubt. Now proof that satisfies your mind to a moral certainty is what we call proof beyond a reasonable doubt, and that is the measure of proof which alone should convince you. It is not a question in these criminal cases, as it is in civil cases, of preponderance of evidence; no weight of preponderance is sufficient to convict a man of a criminal charge, but each element of the offense of which he stands charged must be proven by the people as I have before stated, beyond a reasonable doubt.

In this connection, I also charge you that the law is that ignorance is not an excuse for the violation of the law, nor is it a defense, because the presumption is that all men know the law.

I think you sufficiently understand with what the defendant stands charged here; i. e., a violation of the statute of the State of Michigan, which provides that any one who shall engage in or who shall follow the profession of medicine or surgery shall comply with certain requirements. I will call your attention to that statute more in detail at this time. Now the statute was in part enacted by the Legislature of 1899, and after providing who shall constitute the Board of Registration in medicine it goes on to provide who shall appoint the members of that board, what some of their qualifications shall be, what their terms of office shall be and how vacancies are filled, and how and when they shall hold their meetings,



and where, and what shall constitute a quorum of that board, and provisions relative to some of the officers giving bonds, such as the secretary, then as amended by the laws of 1905, section 3 of that act, provides as follows in part:

On an after the passage of this Act, all men and women who wish to begin the practice of medicine and surgery in any of its branches in this State shall make application to the State Board of Registration in Medicine to be registered and for a certificate of registration. This registration certificate shall be granted to such applicants as shall give satisfactory proof of being 21 years of age and of good moral character, but only upon compliance with at least one of the following conditions named in subdivisions 1, 2, and 3 of this section. Now those conditions are in substance as follows: First, that the applicant shall be registered and given a certificate of registration if he shall have satisfactorily passed an examination before the Board upon the following subjects—and here are enumerated subjects in which the applicant is to be examined and other details of the examination.

Second. The applicant shall be registered and given a certificate of registration if he shall present a certified copy of a certificate of registration or license which has been issued to said applicant by any foreign nation where the requirements of registration in medicine shall be deemed by the Board of Registration to be equivalent to those of this Act.

Third. In substance, the applicant shall be registered and given a certificate of registration if he shall present a certified copy of a certificate of registration or license which has been issued to said applicant within the States and Territories, Districts or Provinces of the United States where the requirements of registration shall be deemed by the Board of Registration in Medicine to be equivalent to those of this Act.

The Act goes on to provide further, omitting some of the sections,—“This Act shall not apply;” and by the way I wish to preface this by saying I am reading you the present section so that you will see that there are some exceptions to this Act.

Section 8: This Act shall not apply to the commissioned surgeons of the United States Army, Navy or Marine Hospital Service in actual performance of their official duties nor to regularly licensed physicians or surgeons from out of this state in actual consultation with physicians

of this state, nor to dentists in the legitimate practice of their profession nor to temporary assistants in case of emergency nor to the domestic administration of family medicines nor to any legally qualified osteopath engaged in the practice of osteopathy under the provisions of Act No. 78 of the Public Acts of Michigan of 1897 regulating and licensing the practice of osteopathy in the State of Michigan.

Now continuing, as amended in the Acts of 1905, the further provision is made in Section 7, as follows: “Any person who shall practice medicine and surgery in this state who is not the lawful possessor of a certificate of registration issued under and pursuant to Act No. 237 of the Public Acts of 1899 or acts amendatory thereof or without first complying with the provisions of this act, except as heretofore provided in Section 3 of this act, shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punished by a fine of not more than \$200 or by imprisonment in the county jail for a period of not more than six months or by such fine and imprisonment, for each offense, and it shall be the duty of the prosecuting attorney of the counties of this state to prosecute violations of the provisions of this Act.”

Now you have noticed that in the course of that statute reference is made to another act which provides for the practice of osteopathy in this state, and I now call your attention as I have been requested by counsel, and as I think proper, in order that you may have the law fully in your minds, to a portion of the Public Acts of 1903, providing for the practice of osteopathy, and the portions which are of importance for your consideration are, I believe, as follows:

“Any person engaged in the practice of osteopathy in this state at the time of the passage of this act who holds a diploma from a regular college of osteopathy, as determined by the Board, and who makes application to the State Board of Osteopathic Registration and Examination before January 1st, 1904, upon the payment of a fee of \$5 shall receive a certificate from the Board without examination.” And in order that you may not be mislead these people to whom reference has just been made here and those who take the examination as provided by the terms of this act, it further provides that they shall receive a certificate

and that when the certificate is filed with the county clerk of the county where he resides,—that is the osteopathic doctor,—“which shall authorize the holder thereof to practice osteopathy in the State of Michigan, but shall not permit him to practice medicine within the meaning of Act No. 237 of the Public Acts of 1899 or any acts amendatory thereto.”

And it further provides in Section 7 as follows: The system, method or science of treating diseases of the human body known as osteopathy is hereby declared not to be the practice of medicine or surgery within the meaning of Act No. 237 of the Public Acts of 1899 of the State of Michigan and not subject to the provisions of said Act, provided that this Act shall not apply to any legally qualified medical practitioner practicing medicine and surgery under Act No. 237 of the Public Acts of 1899 or acts amendatory thereto, nor shall this act apply to masseurs or nurses practicing manual Swedish movements in this State.

Before calling your attention to other matters relative to the evidence in this case, I think at this time I should say to you, and I charge you that in order for the people to establish their case under this statute it is not necessary to show to you that the defendant is engaged both in the practice of medicine and the practice of surgery, and I say to you also at this time that there is no evidence before you or for your consideration relative to his having practiced surgery, but that fact is not necessarily fatal to the people's case, because one who was found by you to have practiced either medicine or to have practiced surgery would come within the terms of the act.

Now in this case certain facts have been stipulated, and I call your attention to them at this time, not for the purpose of emphasizing them in any way, but for the purpose of pointing out to you certain facts which the parties are agreed to, which, of course, are admitted as true and about which you can have no difference of opinion. Now those facts as stip-

ulated are as follows: That during the period covered by the information filed in this case the respondent, Allan Raymond, lived in the City of Battle Creek, and had a place of business on Washington street in said city; that in front of said building was a sign in large letters as follows: “The Raymond Spinal Treatment Company Successfully Treat the Causes of All Acute and Chronic Diseases.”

That during the period covered by the information the said Allan Raymond treated various persons by a course of treatment which consisted of manual applications to the various vertebrae of the spinal column; that said Allan Raymond was not during such time a registered physician and had not received a certificate of registration from the Board of Registration in Medicine of the State of Michigan, and had not filed a copy of such license with the county clerk of Calhoun County, under said act. It is also provided in this stipulation that no drugs or medicines were used by said defendant in the treatments mentioned in the stipulation, nor any instruments other than his hands, and that he did not diagnose any diseases.

Now those are the stipulated facts about which there can be no question with you. They are agreed upon as being true by both the people and the defendant in this case. Those are to be taken by you in consideration with the other evidence produced before you in this court.

You will also probably remember that certain evidence or rather it is not to be termed evidence, but certain replies have been made to certain questions upon this trial which upon application of counsel have been stricken from the record. I



instruct you at this time that such matters as have inadvertently come to your knowledge, but which have been stricken from the record, are not to be considered by you at all in arriving at the guilt or innocence of the defendant in this case.

I think at this time, perhaps I covered it in the early part of the charge, but I take occasion to say again, that it is not for you, as gentlemen of the jury, to determine whether this statute as laid down upon our statute books and the laws of our state is a wise or an unwise statute. It is there and should receive the same attention and be given the same force and consideration as any other of our valid statutes; and it is also not for your consideration, nor should it influence you one way or the other in arriving at your verdict in this case, as to whether the people treated by the defendant in this case were benefited and cured, or whether they were injured and not cured. That is not a matter for your consideration. The question is, whether or not the facts as to what this defendant has done in the way of treating diseases or the causes of disease brings him within the definition of the practice of medicine under our statute, as I shall give it to you, and I now instruct you, gentlemen, that *the practice of medicine, as that term is used in the statute under which this action is brought, means the exercise or performance of any act by or through the use of anything or matter or by things given or applied*

*whether with or without the use of drugs or medicine by a person holding himself or herself out as able to cure diseases or the causes of disease with a view to relieve, heal, cure, or having for its object the prevention, healing, curing or alleviation of disease.*

Now the object, gentlemen of the jury, of this statute, is to protect the public health and prevent impositions upon the afflicted by unqualified pretenders to healing power, and any person not within the exceptions provided by the act under which this prosecution is being conducted, and not having complied with its requirements, who shall, under any pretense, operate on, profess to heal, prescribe for, or otherwise treat any physical or mental ailment of another, thereby renders himself liable to its penalties.

Now, gentlemen, as best I can, I have given you the law applicable to this case, and I wish to reiterate what counsel on both sides have said, that while the case may have been of short duration it is of exceeding importance, and I wish you to give the matter your most careful consideration, as I know you will, applying the facts as proven here, by the measure of evidence as I have told you it should be, to the law as given to you by the court; and arrive at your verdict.

If you find for the people your verdict should be "Guilty." If you find for the defendant your verdict should be "Not Guilty."

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The twisting of the pedicle of a small ovarian cyst may simulate both the symptoms and the signs of attacks of appendicitis.

The history of a discharge from an ear appearing a few days to a few weeks after the beginning of a slowly developing deafness in that ear, unaccompanied at any time by pain, is suspicious of tuberculous otitis media.

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Severe and repeated headaches may be due to the unsuspected presence of otitis media, with or without mastoiditis.

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When operating upon the ureter for calculus or stricture, avoid undue manipulation; it is important to prevent detachment of the ureter from its bed, if possible.—*American Journal of Surgery.*



## The Journal of the Michigan State Medical Society

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MAY, 1906

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### Editorial.

#### THE COMING MEETING OF THE STATE MEDICAL SOCIETY.

We desire to call general attention to the coming meeting of the society at Jackson on Wednesday, Thursday and Friday, May 23rd, 24th and 25th.

In the last five years a radical change has come over our professional societies—a new spirit has been awakened. There is a feeling that the profession is moving on, and that it is necessary for every man to keep awake—alive—alert—if he intends to keep up with the progress of our science.

If any man who reads the current medical journals will take a look at the text books in his own library, he will see all the volumes which are more than seven years old gathering dust—why? Because it does not pay him to read an old book, so rapid is the progress of medical science and art.

It only takes five years for a text book to fall behind. It only takes five years or less for a medical man to fall far behind, unless he sets out to keep up. Herein is the explanation of the fact that live men take post-graduate work.

Live men know that they need mental stimulus—mental polish, and from this it comes to pass, that to-day some of our district society meetings have nearly as

large an attendance as we used to see at the State Society meeting. More and more, the State Society is doing post-graduate work—work that live men cannot afford to miss.

This coming session offers in each section, beside the miscellaneous papers, one day each of a carefully arranged symposium on a thoroughly practical subject.

The aim has been to get good men to present good and particularly practical papers on subjects which appeal to us all. Look at the program in every section, decide whether you can afford to miss such post-graduate work, decide even more carefully whether you can afford to miss the stimulus of contact with your old-time friends, with keen, enthusiastic men. Bring your wife and daughters, bring your own enthusiasm and carry back a fresh enthusiasm to your work. You may miss three days from the daily grind of practice, but your patients, in the months to come, will feel your enthusiasm and esteem you as a man who keeps up with the profession.

Most of us can occasionally afford to go hunting for rabbits or ducks or black bass. We can afford to go hunting for mental stimulus and new views—and the charm of both kinds of hunting is the good fellowship that goes with it.



Since the first of the year the members of the Committee of Arrangement for the Meeting have been busily engaged in working out the many details. They have provided most liberally for our entertainment, and even the most unsocial of us cannot fail to have a good time. With a smoker and reception on Tuesday evening, an address from Dr. Murphy, of Chicago, on Wednesday evening.

and a general entertainment on Thursday evening, the time will be most pleasantly spent.

The meeting is an assured success.



The railroad facilities for reaching Jackson are excellent. Arrangements have been made for excursion rates, on all roads, on the certificate plan. The rates are valid for going and returning three days before and three days after the meeting. When the ticket is purchased, a full fare is paid and a certificate is obtained, which on being signed by the agent, who will be in attendance at the meeting, will entitle the holder to a return ticket at one-third the regular fare. Twenty-five cents will be charged for validating the certificate. This rate does not apply when the regular fare is less than seventy-five cents.



A feature of the work of the medical section will be a clinic, conducted by Doctor Dock, of Ann Arbor, in connection with the symposium on chronic, non-tuberculous, joint affections, a topic which will be interesting and instructive to every one.

This title includes all those joint affections variously called chronic rheumatism, chronic arthritis, gouty rheumatism, arthritis deformans, rheumatoid arthritis, chronic gout, atrophic arthritis, hypertrophic arthritis and a variety of other names.

To insure success, we must have suitable material. Will any member of the Society having patients who he thinks would consent to appear before the meeting, confer with the Secretary of the Medical Section? The Society will pay transportation of such patients to and

from Jackson. We want ten or twelve striking cases, if possible.



**DAVID INGLIS.**  
**President, 1906-1907.**

Many a sharp contest has been waged over the election of president of The Michigan State Medical Society, but peace hath her victories which have ever been alike notable and creditable, and this society honored itself when, in electing David Inglis to its presidency, practically by acclamation, it thus honored him.

He was born in Detroit, December 27, 1850, and is the son of Richard Inglis, a formerly well known physician. His parents were Scotch, and from them he inherited traits which make for staunch and sturdy character.

His early education was acquired in the Detroit public schools, and a course in its High School and one year's attendance at the Literary Department of the University of Michigan laid the foundation for his medical education which he acquired at the Medical Department of the University and the Detroit Medical College, from which institution he was graduated in 1871, following this with a graduation, in 1872, from Bellevue Hospital Medical College, New York City. Two years were spent in study in Berlin and Vienna and thus well equipped, he first entered upon the practice of his profession in May, 1874.

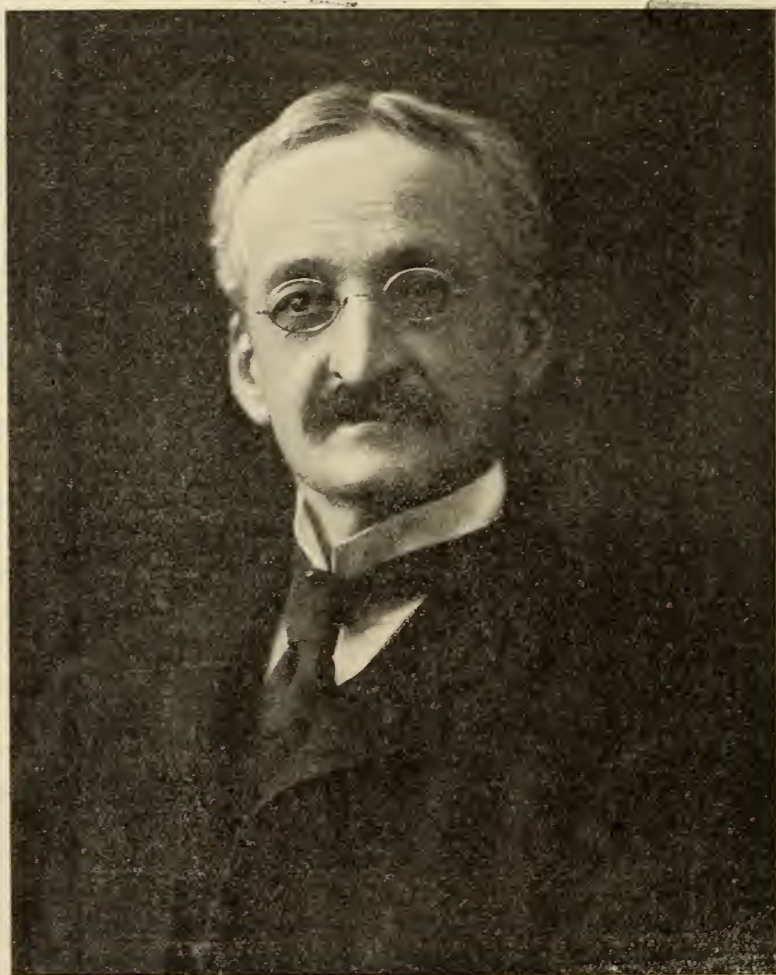
His career as a teacher began, in 1877, with the teaching of histology. He has since taught in the departments of Practice of Medicine and Nervous and Mental Diseases, and many are the physicians who now delight to recall the happy hours spent in his class-room. The practical has always characterized his teach-

ing. So prepared as to make his classroom work of value to the keenest student, he always has something kindly and practical and easily understood by the dullest.

His professional life has been an open book, known and read by the profession

of Grosse Isle a delightful refuge from the cares of professional duties.

A careful student, a logical thinker, a wise and practical counsellor, a genial friend, interested in all that affects the welfare of the profession, the city, the church, the state, such is the man whom



of the state, and his valuable papers have been often contributed to the meetings of this society. His views are broad and liberal, alike in medicine and religion, and he is a genial comrade, either in the medical gathering or the social circle.

Domestic in his tastes, his home life has been ideal and he now finds the quiet

the Michigan State Medical Society delights to honor with the highest gift within its power to bestow.

"His life is gentle, and the elements  
"So mixed in him, that Nature might stand up  
"And say to all the world: 'This is a man'."

May he live long and prosper.



**IMPORTANT WORK IN CALHOUN.**

The Calhoun County Society has taken steps to incorporate in order that the officers may better continue the fight against quackery, which was begun some eighteen months ago. We have received a communication concerning the work, which is of such importance that it is published among the original articles, in this issue. The history of the efforts of the society and the admirable charge to the jury, in a recent case, by Judge North should be carefully read.

It was somewhat discouraging, in this case, that the jury, after six hours' deliberation, disagreed, but the liberal definition, by the Court, of what constitutes the practice of medicine, is most encouraging. It is the first definition from the circuit bench, since the amendatory acts of 1903, and as such, will undoubtedly prove of much importance in the future.

This definition conforms to several recently rendered in other states. An interesting case has just been decided by the Supreme Court of Tennessee. A quack was shown to have advertised to cure all diseases by means of an electric light bath, the diagnosis first being made by subjecting a drop of blood to microscopic examination. The defendant took refuge in the exemption granted to opticians, but the court held that the determinative fact against him, was that he advertised himself as a practitioner and solicited patients afflicted with disease, the essential clause in the definition of what constitutes the practice of medicine.

The Supreme Court of Alabama, last month, confirmed the ruling, that the practice of osteopathy is within the meaning of the accepted definition of the practice of medicine.

In February, the Supreme Court of Minnesota rendered the following definition: "Any person shall be regarded as practicing medicine within the meaning of this act, who shall append the letters "M. D." or "M. B." to his or her name, or for a fee prescribe, direct or recommend for the use of any person any drug or medicine or other agency for the treatment, cure or relief of any wound, fracture or bodily injury, infirmity or disease; and there is a provision that this shall not apply to dentistry." The act, the court says, is a beneficial one, and is entitled to a liberal construction.

It is indeed gratifying that the definition rendered by Judge North, and printed elsewhere in this issue, conforms so closely to these broad interpretations. When the opportunity arises, it would seem most probable that the Supreme Court of our own state will confirm the definition.

Calhoun county is awake, and has already accomplished most important results.

**RECIPROCITY WITH NEW YORK.**

Those familiar with the splendid system of education in New York State, where the regents control the training of its citizens from the primary department to the entrance upon professional work, cannot fail to appreciate the latest evidence of the high standard of medical registration in Michigan.

At a meeting held in Pittsburg, on March 18th, representatives of the New York Regents and the Michigan Board of Registration made a critical and comparative examination of the New York and Michigan medical acts, and the standards of preliminary and medical educa-

tion in Michigan, and decided that a license of endorsement should be offered by either state to those who had won a license, by examination, in the other. That our standards are not without honor abroad, is proven by the fact that this proposal of reciprocity came from New York.

Six years ago, Michigan was regarded as the state having the lowest requirements. To-day, she is at the head of the list. New Jersey is the only other state with which New York reciprocates.

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## Reports

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### Annual Meeting of the Michigan State Nurses' Association.

LULU B. DURKEE.

The Second Annual Meeting of the Michigan State Nurses' Association was held in Ann Arbor, April 4 to 6, 1906. There were about 100 members present during the session and several new members were added.

The chief object for which this body of women is working is the passing of "An act to provide for the examination, licensing and registration of nurses." The failure to get this bill through the last legislature is only stimulating the State Association to greater efforts.

At this meeting, a large part of the work of the second day was devoted to papers and discussions on state registration.

Dr. Beverly D. Harison, secretary of the State Board of Medical Registration, gave an address on "State Registration for Nurses."

Dr. Harison said in part:

State registration for nurses involves state recognition and regulation of one of, if not *the* most important, arduous and self-sacrificing of all avocations.

The primary object of state recognition is regulation, which results in a certain status with the usual ultimate result of increased qualification and usefulness to the people.

State regulation of nurses would, in a comparatively brief period, promote uniformity of qualification, and thereby afford increased protection to the public.

The passage by the legislature of a proper act for registration of nurses, would not only be a just and equitable recognition of this most important and necessary adjunct to the profession of medicine,—the oil and axle of the medical coach—but it would result in a most material benefit and protection to the people, who, above all others, are most directly interested in its passage.

Miss Sophia F. Palmer, Editor-in-Chief of the *American Journal of Nursing*, who has been called the "mother of the state registration movement" in America, gave her idea of "How to Pass This Bill" in a clear, concise and vigorous manner. In the discussion following her paper, Miss Palmer remarked: "The strongest 'pull' on the legislature is, that state registration will protect the public, and the public must ask for this protection for themselves."

"A petition, signed by prominent citizens, medical men, lawyers, clergymen and women of prominence, has more weight with the public than a petition signed only by nurses, although this is also absolutely necessary."

Mrs. Caroline Bartlett Crane, of Kalamazoo, made a most eloquent plea for "Nursing in That Neglected Field, the County Almshouse." She urged the needs of the pauper sick, and pleaded for the help of the trained nurse in the poor house. A committee of graduate nurses to confer with a committee from the State Federation of Women's Clubs, in order to formulate plans for establishing nurses in county houses, was appointed at her earnest solicitation.

Dr. Charles B. G. de Nancrede invited the nurses to attend a surgical clinic at the hospital.

Dr. Victor C. Vaughan read an article on "Tuberculosis," in which he drew attention to the importance of, and methods for stamping out the disease, and the need of utter fearlessness in dealing with it in all its stages—points of peculiar value to the nurses of the Visiting Nurses' Association, as well as others.

Under the direction of Prof. A. A. Stanley, of the University School of Music, a most pleasing musical program was rendered on Tuesday evening, by some of the best talent among the members of the faculty.

The people of Ann Arbor, aside from those of the nursing fraternity, were particularly interested in this meeting of graduate nurses, as was plainly evinced by the manner in which the Association and its guests were entertained.

The next annual meeting of the Association is to be held in Battle Creek.

The officers for the following year are:



President—Miss Sarah E. Sly, Birmingham, Mich.

First Vice President—Mrs. L. E. Gretter, Harper Hospital, Detroit.

Second Vice President—Miss E. L. Parker, State School for the Blind.

Treasurer—Miss Annie N. Coleman, Saginaw General Hospital.

Corresponding Secretary—Miss R. Gifford, Grand Rapids.

Recording Secretary—Miss Agnes Deans, Detroit.

## Book Notices

**A Treatise on Surgery.**—In two volumes. By George R. Fowler, M. D., Examiner in Surgery, Board of Medical Examiners of the Regents of the University of the State of New York; Emeritus Professor of Surgery in the New York Polyclinic, etc. Two imperial octavos of 725 pages each, with 888 text illustrations and 4 colored plates, all original. Philadelphia and London: W. B. Saunders Company, 1906. Per set: Cloth, \$15.00 net; half morocco, \$17.00 net.

The sad death of Dr. George R. Fowler, the gifted surgeon of Brooklyn, is still fresh in our memory. He left Brooklyn several days before the opening of the Centennial Celebration in Albany, in order to have a few days of uninterrupted work on the index of his *Treatise on Surgery*, and while thus engaged was stricken with appendicitis, which proved fatal.

His work is a fitting memorial, for it will stand for many years, as one of the very best of the many works on surgery. There was no brighter mind or more conscientious and painstaking worker among the surgeons of greater New York than Dr. Fowler, so that much was expected of his new work. It is not too much to say that all expectations have been fulfilled. The book is an accurate treatise on surgery, skillfully presented, and it is up to date in every particular.

The first part of the work deals with general surgery, and embraces what is usually included under the head of principles of surgery. Special attention is given to the subject of inflammation from the surgeon's point of view, due consideration being accorded the influences of traumatism and bacterial infection as the predisposing and exciting causes of this condition. Then follow sections on the injuries and diseases of separate tissues, gunshot injuries, acute wound diseases, chronic surgical infection (including syphilis), tumors, surgical operations in general, foreign bodies, and bandaging. The second part of the work is really the clinical portion, devoted to regional surgery. Herein the author especially en-

deavors to emphasize those injuries and surgical diseases that are of the greatest importance, not only because of their frequency, but also because of the difficulty of diagnosis and the special care demanded in their treatment. Throughout special attention has been given to diagnosis, the section on laboratory aids being unusually excellent. The text is elaborately illustrated with entirely new and original illustrations, and evidently neither labor nor expense has been spared to bring this feature of the work up to the highest standard of artistic and practical excellence.

**The World's Anatomists.**—By G. W. H. Kemper, M. D., with 11 illustrations, nine of which are portraits. Boards. 3x6 in. Philadelphia: P. Blakiston's Son & Co. 1905.

This little book, containing the matter which recently appeared in *The Medical Book News*, is well worth while. It contains brief sketches of the masters of anatomy, of all times, covering a period of 2,200 years. In it will be found, in a nut-shell, information, the gathering of which must have required much painstaking and careful research. There can be but one criticism—it is all too short—a page, instead of a paragraph concerning each man, would have been more acceptable.

Any book which has for its object, as has this, the bringing together, in an available form, of data concerning the men like Gimbernat, Poupart and Fallopius, whose names we speak daily but about whom we know next to nothing, should be welcomed by every student, graduate and under graduate alike.

**Diseases of Metabolism and of the blood, Animal Parasites, Toxicology.**—Edited by Richard A. Cabot, M. D., Instructor in Clinical Medicine in the Medical School of Harvard University. 649 pages; 58 illustrations, with one colored plate. Price, \$5.00. New York: D. Appleton & Company. 1906.

This is the second volume of a series of translations from "*Die Deutsche Klinik*," which are being prepared under the supervision of Julius L. Salinger, M. D.

The object of the volume is to present a picture of those diseases which have been designated as of obscure origin, and it is a welcome contribution to our literature, for we have no work in English which gives so fully and so clearly the reasons for what occurs in these diseases. It is, in reality, a set of monographs upon allied topics, each by a master. When one considers that the chapters were written by such eminent clinicians as v'Noorden, who writes on Over and Under Nutrition; Naunyn, who contributes Diabetes Mel-



litus; Gerhardt, whose theme is Diabetes Insipidus; Ebstein, who prepared the chapters on Gout and Obesity, and Ewald, who sets forth the facts concerning Myxedema and Organotherapy, one realizes that the work represents the most advanced teaching in medicine.

The chapters in the portion dealing with the Diseases of the Blood, are from the pens of Ehrlich, Grawitz, v'Leube, Senator and Litten, a sufficient guarantee that this portion is unexcelled.

The translator has rendered the originals into excellent and forceful English, a task by no means easy. The editor has made many annotations and has maintained his reputation for thoroughness.

One of the distinguishing features of the work, which renders it especially valuable to the practitioner, is the very full discussion of treatment, embracing full diet lists, as well as all the modern aids, such as hydrotherapy, gymnastics, massage, etc. The work deserves a large sale.

The third volume, treating of "Diseases of the Digestive Organs," edited by Billings, of Chicago, is announced.

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**The Examination of the Function of the Intestines by Means of the Test-Diet.** Its Application in Medical Practice and its Diagnostic and Therapeutic Value.—By Prof. Dr. Adolf Schmidt, Physician-in-chief of the City Hospital Friedrichstadt in Dresden. Authorized Translation from the latest German Edition, by Charles D. Aaron, M. D., Professor of Diseases of the Stomach and Intestines in the Detroit Post-Graduate School of Medicine, etc. With a frontispiece plate in colors. Crown octavo, 91 pages, extra cloth. Price, \$1.00, net. F. A. Davis Company, publishers, 1914-16 Cherry street, Philadelphia.

This little book makes available for those who do not read German, one of the most important monographs which has recently appeared. The monograph of Schmidt is based upon a series of lectures, delivered in 1903, which sums up the results of the author's extensive investigations, carried out during eight years.

The work was attempted in order to establish a method for the examination of intestinal digestion, applicable for every day use, somewhat analogous to the examination of the stomach contents. The chemical investigation of the feces has been much neglected and few books give reliable methods. This work, therefore, is most important and if it is demonstrated that the methods are reliable, the value of stool examinations should be equal to that of the urine and stomach contents.

In order that such examinations may be practical, it is necessary that (1) we have, as a starting point, a uniform composition of the feces—a normal feces, and (2) that the stool investigation be simplified as much as possible. Schmidt has

apparently established these two conditions. The methods are comparatively simple.

Complete directions for giving the test diet, and collecting and examining the feces are given, and the variations in diseases are concisely explained.

The translator, a member of our State Society, has done his work well, and this translation should popularize stool examination, giving it the place which its importance demands.

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**The Operating Room and the Patient.**—By Russell S. Fowler, M. D., Surgeon to the German Hospital, Brooklyn, N. Y. Octavo of 172 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, \$2.00 net.

This book gives many useful and helpful hints on operative technic with the pre-operative procedures in the sterilization of dressings, ligatures, instruments, etc. The various formulæ which the author has collected make the book a useful one for ready reference. The section on anesthesia is good.

We question the value of giving lists of instruments for various operations. Every operator has his preferences and no one can make a list for another. Forty pages are given up to such lists.

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**Nursing in the Acute Infectious Fevers.**—By George P. Paul, M. D., Assistant Visiting Physician and Adjunct Radiographer to the Samaritan Hospital, Troy, New York. 12mo of 200 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, price \$1.00 net.

Physicians rarely realize how much valuable information can be gained from well written books on nursing. There are innumerable little details which are known to nurses—details conducive to the comfort and happiness of the patient, if not absolutely essential to his recovery, which are contained in these books and are not always appreciated by the physicians.

This book of Paul's is an excellent one on a most important subject. Its scope may be judged from the contents of the three parts into which the author has divided the subject. The first treats of fevers in general; the second of each fever individually; the third deals with practical procedures and information necessary to the proper management of the various diseases discussed, such as antitoxins, bacteria, urine examination, poisons and their antidotes, nemata, topical applications, antiseptics, weights and measures, etc. Altogether, it will be found that Dr. Paul has rendered a valuable service, not only to the nursing but also to the medical profession.

**A Reference Handbook of the Diseases of Children.**—For students and practitioners. By Prof. Ferdinand Fruhwald, of Vienna. Edited, with additions, by Thompson S. Westcott, M. D., Associate Professor of Diseases of Children in the University of Philadelphia. Octavo volume of 553 pages, with 176 illustrations. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, \$4.50 net; Half Morocco, \$5.50 net.

This book, as the title implies, is more a reference hand-book, useful to the general practitioner and specialist, than as a text book for students. It commends itself, coming as it does from the pen of the chief of clinic in the Vienna Polyclinic, especially for the up-to-date European view of this important subject.

Pathology, symptomatology and diagnosis are accurately treated in a clean, concise manner. Contrary to the usual German custom, most emphasis is given to treatment, which is discussed in a very suggestive and practical way. Due attention is given to prophylaxis, general hygiene, dietetics, and other methods not medicinal. There are timely paragraphs on hardening, and care of the mouth and teeth.

Most striking is the large variety and number of proprietary preparations recommended. In the article on artificial feeding, alone, over twenty milk substitutes or additions of a proprietary nature are favorably mentioned. Variations from our own methods of practice have been critically commented upon, in a very satisfactory way, by the editor. The chapter on Artificial feeding is of considerable interest. While cow's milk is given as the best available substitute for mother's milk, only simple water dilutions are advised, and the impression is given that some form of sterilization is necessary. The importance of our accurate American method, of percentage modification, of absolutely pure cow's milk, has been added by the translator. The chapter ends with the following wise statement: "The simpler the method employed, and the less elaborate the manipulations, the better will be the chance of success."

The acute infectious diseases receive a comparatively full discussion in respect to symptomatology, as well as prophylaxis and treatment.

The press work is good, the illustrations are excellent and the size of work convenient. One not used to the alphabetical arrangement must question its advantage over a good index.

The book can be recommended as giving a brief, up-to-date, German view of this important subject.

#### Books Received.

**The World's Anatomists.** By G. W. H. Kemper. B. Blakiston's Son & Co.

**The Natural Laws of Sexual Life.** By Anton Nystrom, Stockholm. Translated by Carl Sandzen. The Burton Company, Kansas City. Price \$2.

**Nursing in Acute Infectious Fevers.** By R. S. Fowler. W. B. Saunders Company.

**A Text Book of Materia Medica, Therapeutics and Pharmacology.** By George F. Butler. W. B. Saunders Company. (Notice next month.)

**A Treatise on Surgery.** In two volumes. By George R. Fowler. W. B. Saunders Company.

**The Test Diet in Intestinal Diseases.** By Prof. Dr. Adolf Schmidt. Translated by C. D. Aaron. F. A. Davis Company.

**A Reference Handbook of the Diseases of Children.** Prof. Ferdinand Freewald. Edited, with additions, by Thomas S. Westcott. W. B. Saunders Company.

**A Memoir of Dr. James Jackson.** By James Jackson Putnam. Houghton, Mifflin & Co. (Full notice next month.)

**The Medical Diseases of Infancy and Childhood.** By Alfred C. Cotton, A. M., M. D., Professor of Pediatrics in Rush Medical College, etc. 6½ x 9½ in., 670 pages, 219 illustrations. Cloth. Price \$3.50 net. Philadelphia. J. B. Lippincott & Co. 1906. (Notice next month.)

**A Compend of Obstetrics.** By Henry G. Landis. Eighth Edition, 227 pages, illustrated. Blakiston's Quiz Compend. Philadelphia, P. Blakiston's Son & Co.

### County Society News.

#### CALHOUN.

The first quarterly meeting of the Calhoun County Medical Society was held in Battle Creek Tuesday, March 6, 1906, with a large and appreciative attendance.

The history of the work of the past year of the prosecution of illegal practitioners was outlined by Dr. H. A. Powers, of Battle Creek. During this time fifteen illegal practitioners in Battle Creek have left. It was unanimously voted by the society to continue these prosecutions as a society throughout the county, and, if possible, interest other counties in like work, and also endeavor to obtain a Supreme Court definition of the practice of medicine in this State.

A committee consisting of H. A. Powers, J. C.



Brown, C. S. Gorsline, Battle Creek; Geo. Hartford, Albion; G. B. Gesner, Marshall; Geo. Haynes, Homer; R. M. Gubbins, Cresco, was appointed to prosecute the work.

A committee consisting of Drs. Powers, Vary and Miller was given power to incorporate the society.

The scientific part of the afternoon was devoted to three interesting papers.

Dr. Wm. A. Spitzley, of Detroit, gave an extremely interesting and scholarly paper entitled "Breast Tumors in Young Women."

"Ear Conditions of Practical Importance to the Family Doctor" was the subject of an able paper by Edw. J. Bernstein, of Kalamazoo.

The program closed with a paper, "A Few Electrical and X-ray Cases," by Eugene Miller, of Battle Creek.

Dr. Geo. B. Gesner, of Marshall, was chosen delegate to the State Meeting.

The next meeting of the society will be held in Albion, June 12, 1906.

A. S. KIMBALL, Sec'y.

#### INGHAM.

The regular meeting of Ingham County Medical Society was held at the office of Dr. Foster in Lansing, on March 8th, 1906. Twenty-three members and five visiting physicians were present. Three new members were elected, H. M. Landon, Bret Nottingham and L. M. Sanford, which makes six new members since our annual meeting in November.

Dr. Herman Ostrander, of the Kalamazoo Asylum, gave an address upon "The Cause and Prevention of Insanity."

Dr. Joseph Foster read a paper upon "The Care of the Eyes and Ears of Children."

Dr. C. L. Barber presented a case of Syphiloderma.

L. ANNA BALLARD, Sec'y.

#### IONIA.

The Ionia County Medical Society held its second quarterly meeting March 22, 1906, at Belding. Invitations were extended to every reputable physician in the county, irrespective of school or practice. The day was very inclement and many physicians, living at a distance, were unable to attend owing to the great storm and drifted condition of the roads. But a good attendance was had—more than double that of any previous meeting.

There was a generous response from practitioners of other than the regular school and a

genuinely fraternal feeling was present, permeating the atmosphere of the place and making one of the most enjoyable occasions in the history of the society. The physicians and surgeons of Belding did themselves great credit by furnishing a banquet on this occasion, at that famous hostelry, "The Hotel Belding." Taken as a whole, the physicians of the Silk City are noblemen, and are doing much to obliterate the old class feeling that has in past years hindered the advancement of the profession.

Dr. J. W. Wilkerson, of Orleans, read a paper on "Humidity and Moisture; Their Action on the Progress of Disease."

Dr. R. W. Alton, of Portland, read a paper on "Extreme Heat as a Climatic Element in Developing the causes and shaping the course of disease."

These papers called out a very animated discussion and served as seed thoughts for future meditation.

Drs. Pinkham and Morris presented a very interesting clinic in the person of a young man who, more than a year ago, fell across a live electric wire, was electrocuted, and yet lived! Subsequent surgical proceedings found it necessary to amputate the right arm at the shoulder, and the left forearm just below elbow. The burn of the wire in forehead was yet unhealed, as the skin, perisoteum, and outer table of skull, had been burned away. It was necessary to ligate the subclavian artery, owing to the disintegrating influences of the electrical burn. This was done successfully by Dr. Richard Smith, of Grand Rapids. The body was frightfully burned across the lower abdomen, as the patient hung thus across the wire. The penis was burned and the skin destroyed. An amputation of penile organ was made leaving short stump. The scrotum was eviscerated. Patient has made entire recovery. Urinary bladder is intact and he urinates normally.

The names of Drs. Isaiah Morris, of Belding, and John J. McCann, of Ionia, were added to our membership.

The next meeting will be held at Portland May 31st.

CHARLES S. COPE, Sec'y.

#### LENAWEE.

President L. S. Town called the meeting of the Lenawee County Medical Society to order at Hudson, February 13, 1906, with about twenty members and guests present.

There being no clinical cases, Dr. E. P. Felch,



of Hudson, presented the first paper on "Some Suggestions As to the Need of a More Thorough Diagnosis," which was a most excellent paper and full of thought. A very interesting discussion followed by Doctors Lamley, Eccles, Morden and Town.

Dr. T. A. Ewart, of Morenci, gave a report of a case of compression of the brain, and remarks. Not much discussion was aroused, as all concurred with the doctor's views.

In the absence of Dr. M. B. Prentiss, of Hudson, Dr. Oat Whitney, of Jasper, read his paper, the topic being, "From Graduation to Practice." The paper was well received and brought out many good points. A lively discussion followed by Doctors McCue, Sprague, Evers, Eccles, Felch, Morden and Spaulding.

In the absence of Dr. C. A. Tallman, of Weston, who was to have read a paper on "Lobar Pneumonia," Dr. Daniel Todd, of Adrian, addressed the Society on the treatment of pneumonia.

Dr. R. H. Nelson, of Hudson, gave his personal experiences with biliary calculi, which was very interesting and brought forth a good discussion.

President L. S. Town, of Geneva, was unanimously elected as delegate to the annual meeting of the Michigan State Medical Society, at Jackson next June.

Dr. W. H. Maddox, formerly of Tecumseh, but now of Wauseon, Ohio, was granted a transfer to the Fulton County Medical Society upon vote.

Upon motion it was decided to hold the April meeting in Tecumseh.

Though not voted upon it was the sense of many of the members present that the August meeting should be devoted to the discussion of the business affairs of the county profession and means to increase interest in the society.

Dr. William E. Jewett, of Adrian, addressed the society at length, and presented the following resolution, which was unanimously adopted: Resolved, That the Lenawee County Medical Society tender its thanks to the American Medical Association, and also to Collier's Weekly and the Ladies' Home Journal for their exposure and crusade against the deadly nostrums and proprietary medicines, and also to the Journal of the American Medical Association for its stand for an ethical profession. The committee on resolutions was granted time to act.

The society deplored the sad condition of our beloved confrere and it was voted to extend our deepest sympathy to Dr. Jewett Williams, his family and relatives.

Those members in arrears for two years were voted to be stricken from the roll.

There being no further business to come before the society it was moved and voted to adjourn.

After supper, those members having to remain for the late train assembled for a two hours' quiz, which was much enjoyed and proved very beneficial. The meeting was pronounced by those in attendance as the most enthusiastic and interesting that was ever held by the society.

E. T. MORDEN, Sec'y.

### Some Suggestions as to the Needs of More Thorough Diagnosis.

E. P. FELCH, M. D.,  
Hudson.

No one at the present time questions the necessity of an accurate diagnosis, as early as possible, before an intelligent line of treatment can be carried out. It is further admitted that diagnosis is not the only important thing, but that it is necessary if possible, to ascertain the causes of the conditions with which we meet.

Every effect has its cause, and yet this cause may not be easy to find. In fact, it may be that the primary cause has ceased to operate, but has left as a legacy certain effects, which in turn have become a source of irritation, annoyance and perhaps danger to our patient. It is a question whether or not in many cases certain agencies may not have been the inciting cause perhaps years before but, at the time we see the case, had ceased to become operative, although still leaving its effects, which in turn have incited other disturbances and thus, what was first an effect becomes a causative factor in inciting other effects.

It is needless to rehearse the advantages of diagnosis, nor is it necessary to call your attention to points which go to assist us in making a diagnosis, such as the history of the case, present symptoms, physical examination, etc. But I wish to call the attention of the members of this society more particularly to the need not of more *knowledge*, but of more *thoroughness*, in the application of the knowledge we have; more carefulness in attention to details, and less generalizing.

It ought to be taken for granted that any physician who has been able to obtain a diploma from a recognized medical college and who has subsequently been granted a state certificate to practice, should be able to make a diagnosis and it has occurred to me that the trouble is not so much

from lack of *skill* as from a lack of *attention* to details.

The diagnosis of acute diseases, I think all will admit, is easier than an accurate diagnosis of chronic diseases. I believe that almost any practitioner, who has handled chronic diseases for any length of time will admit that, in some cases, the only way to arrive at a diagnosis is by taking a systematic history and making a careful examination of the body in all of its minutest details, before we can arrive at anything like an accurate diagnosis.

Another mistake which I think is often made is in *snap shot* conclusions. Some physicians think it is brilliant to make an off hand diagnosis, but I believe that the careful physician will see the necessity of taking time to complete a diagnosis. It is not always the man who pretends to make a diagnosis at *sight* who is the best able to do so.

I have very vivid recollections of my three years in college and of the numerous cases brought there in which there had been a mistake in diagnosis, and I had it so thoroughly impressed upon my mind that there was great danger of a mistake and a great lack of thoroughness that it has always been my aim to give close attention in the matter of diagnosis. How far I have fallen short of the mark of an accurate diagnosis no one knows better than myself but, nevertheless, I have made the effort and hope that I may continue to do so as long as I attempt to treat diseases.

In the work in which I now am, and have been engaged, I constantly see the results of mistakes in the line of diagnosis and, while from our records, I could write a volume on the mistakes in diagnosis, I will only give a few illustrations, assuring you that these are not isolated cases but a fair sample of what we meet.

Case 1. Nellie L., aged 10, had been treated for what is called "stomach trouble," for a period of from 1 to 2 years. As near as we could determine, no careful examination had been made, but upon examination here, we found a growth of some kind in the abdomen. An exploratory incision was decided upon and resulted in the removal of a 12½-lb. neoplasm, which is now on exhibition.

Case 2. Mrs. B. came with a diagnosis of spinal trouble and had been treated for that condition by several physicians for a number of years. A thorough examination revealed a retroflexed uterus with procidentia, with all the symptoms attendant upon such conditions. This certainly was something different from anything like a disease of the spinal cord.

Case 3. Mrs. A. had diagnosis, first, of ovarian tumor, second, of bronchitis, and third of rheumatism. This was one of the cases where it required time for a diagnosis. The trouble steadily became worse for a period and then made some improvement, by a change of climate.

Case 4 is one which did not come under my observation but concerning which I knew something. It was that of Mrs. B., who had suffered for years from some kind of gastric irritation. Many attempts were made to relieve the condition and finally her attending physician discovered an eye lesion and advised a thorough examination of the eyes. The result of this case was, that after the patient had been fitted with glasses, the stomach trouble entirely disappeared. One instance in which the affected organ and the cause were widely separated.

Case 5. Mr. H., who had been treated for about five years for some unknown trouble. The examination revealed a general neuritis, which practically subsided after about six months' treatment, extending over a period of about one year and a half.

Case 6 was that of Mr. M., who had been treated for about two years for muscular rheumatism. Careful examination of this case also revealed a neuritis.

Case 7 was that of Miss T., who had been treated for all sorts of troubles, but in which a careful diagnosis revealed a well advanced muscular asthenopia.

Case 8 came with expectations of having to submit to a rectal operation. The history of the case developed the fact that she had been treated by six different physicians; none of them had ever examined her, but had simply depended upon symptoms of rectal irritation which came on at her menstrual period, until finally one or two had advised her to go somewhere and be operated upon for hemorrhoids.

A careful examination of this case revealed no hemorrhoids but showed a diseased right tube and ovary and a diseased left ovary. There was no possible excuse for rectal operation and consequently an abdominal section was made. Two cystic ovaries were removed and one tube, and the patient is now convalescing.

I do not wish to be understood as implying that physicians do not know how to diagnose, but I do wish to make plain the fact that many of them lack thoroughness in the use of the knowledge they have.

Far be it from me to attempt to instruct the members of this society in the methods of diagnosis. Every physician has his peculiar methods

but, of course, we are all guided by the same general rules. We may be able to diagnose acute disease with comparative ease but, as I have said before, it is usually the chronic cases which offer the most difficulty. Such is the dependence of one organ upon another and such is the relationship of the physiology that one of many organs may become reflexly affected, as the result of an irritation in some, perhaps distant, organ of the body.

This being the case, it is frequently true that it is difficult to determine which organ is primarily affected and which of the organs is keeping up the irritation.

There are many cases in which it is almost impossible to locate the primary cause and it seems that the only method is by a thorough examination of every organ of the body.

If this method be adopted and several of the organs of the body are found to be diseased, either structurally or functionally, it is only logical to proceed to put one organ after the other right until the whole system has been placed in as nearly normal condition as possible.

My plan is to first get an accurate history of the case; taking into consideration the patient's history even back to the childhood, for I firmly believe in the influence which the condition of a child's life has upon the individual's health in after years. I then carefully inquire into the family history as far back as the grandparents on both sides and, sometimes, uncles and aunts. I then commence my diagnosis with an examination of the organ most offending, then taking the different organs until the entire body has been examined.

This, of course, necessitates an examination of the teeth, the eyes, the nose, the ears, all the abdominal organs and the lower orifices.

It also includes a chemical and microscopical examination of the urine and, if necessary, of the feces and, when necessity demands it, of the blood and sputum.

Diagnosis is no easy matter, even with the thoroughness which I have outlined, but I firmly believe that if physicians would exercise the knowledge which they have, that a larger percentage of the cases could be diagnosed and cure or relief brought to a greater number of patients, with the result that our clientele would be better pleased and the dignity of the profession enhanced.

#### MENOMINEE.

The following is the list of officers of the Menominee County Medical Society:

President—Dr. Eugene Gignon.

Vice-President—Dr. W. R. Hicks.

Secretary-Treasurer—Dr. R. A. Walker.

Delegate—Dr. H. A. Vennema.

Alternate—Dr. R. A. Walker.

ROBERT A. WALKER, Secretary.

#### OAKLAND.

The regular meeting of the Oakland County Medical Society of March 13th was held in Pontiac, with Dr. R. LeBaron, president of the society, in the chair. The meeting was well attended, those present from outside the county being Dr. George Dock and Dr. Reuben Peterson, from Ann Arbor, and Dr. E. C. Stevens, of Detroit.

The regular program consisted of a paper on "Pneumonia" by Doctor Dock, which called forth a full discussion from those present, and a paper, illustrated with a lantern, on "Shortening the Round Ligaments Within the Inguinal Canals, Through a Single Suprapubic Transverse Incision, With or Without Opening the Peritoneal Cavity," by Doctor Peterson. The discussion of Dr. Peterson's address was led by Doctor Stevens.

Dr. Mason W. Gray, of Pontiac, was elected delegate to the Jackson meeting, and Dr. Clark J. Sutherland, of Clarkston, alternate.

A resolution was adopted approving the course of *The Ladies' Home Journal* and *Collier's Weekly* in fighting the great nostrum fraud, and declaring it the duty of every physician of the county to use his influence to secure the passage of the bill formulated by the editor of the former publication, by the next state legislature.

Another resolution adopted, declared it the sense of the society that there should be established at Washington a Department of Public Health, with representation in the Cabinet of the President.

MASON W. GRAY, Sec'y.

#### WAYNE.

General meeting, February 19, 1906. Dr. J. E. Davis read the paper, "The Value of Drugs Used to Assist Labor." (This paper appears in full in this issue.)

Dr. Sarah G. Banks said that experience had taught her to depend more and more on nature, rather than on drugs.



**Dr. C. Hollister Judd** said that he had never seen any harm from Hirst's method of giving ergot at the end of the second stage, as observed by him in Philadelphia. He could not understand how the placenta could be said immediately to follow the fetus into the vagina.

**Dr. A. H. Bigg** stated that his best results in treatment of rigidity of the os uteri were from subcutaneous injection of 1/100—1/60 gr, atropine. Certain patients presented idiosyncrasy for cinchifuga so that the use of this drug occasioned very severe headache.

**Dr. J. H. Carstens:** Rigidity of the os is often due to the fact that labor has not begun at all, and will not naturally begin perhaps for several weeks, the labor pains being simulated by uterine neuralgia. Ergot should never be used till the os is fully dilated; if used before the expulsion of the fetus, forceps should be employed if natural delivery does not occur in thirty minutes.

**J. C. Kirker** said that he also had learned that rigidity of the os was often because labor had not yet begun.

**Dr. Emil Amberg** mentioned that the use of quinine in ten grain dose during parturition, when there was always a chance of contracting deafness, would increase this chance.

**Dr. Davis:** The placenta immediately follows the fetus only in certain cases, but in these cases, ergot, given by mouth, at birth of child, would not have time to prevent hemorrhage; while, in cases of delayed separation of the placenta, ergot thus given might lock the uterus. If quinine is to be given as an oxytocic at all, it must be given in a dose as large as ten grains; two or three grains only reduces uterine irritability. Ergot before delivery may be wise in hospital practice where there is every facility for forced delivery, if needs be; but in the hands of more practitioners than not ergot before delivery will do harm. In a normal case of parturition, drugs advised against.

**Dr. C. D. Aaron** read a paper: "The Treatment of Ulcer of the Stomach."

In the severer cases the physician is usually called when there is hematemesis. It is necessary to stop the vomiting and keep the patient as quiet as possible, for every movement of the body increases the loss of blood. Codeine phosphate, hypodermically, acts better and is more rational than other narcotics in these cases. One-half grain of codeine phosphate can be given at once and repeated every half hour until a narcotic effect has been produced. As a hemostatic the hypodermic ergot preparations must not be forgotten. Adrenalin has been effectual in some

cases, 20 to 30 drops of a 1% solution of adrenalin chloride has been given by mouth with good effect. Gelatin has been used during late years to stop hemorrhage. It does not, as was at first supposed, increase the fibrin in the blood. It has been found that gelatin assists in the forming of a thrombus when brought in contact with a bleeding vessel. Ewald says operative measures should never be resorted to until ice water lavage has been tried and failed.

The important point in the treatment of gastric ulcer is to keep the patient in bed as quiet as possible. When the hemorrhage has once stopped, no food or drink must be allowed. If we begin at once to fill the stomach, the bleeding surface will be stretched, dislodging the clot, and starting the hemorrhage again. Orthoform is said to relieve the pain in gastric ulcer by its anesthetic effect. For this reason it has been used as a diagnostic remedy, for if the pain be relieved by orthoform, a positive diagnosis can be made. Orthoform, will not anesthetize nerve endings when they are protected by skin or mucous membrane; if it is certain that it relieves pain in the stomach, it can do so only by coming in contact with a surface from which the mucous membrane has been removed.

In gastric ulcer, the blood is lacking in hemoglobin and the administration of iron, if it can be tolerated, is beneficial and many times curative. In spite of the value of internal treatment, there are complications when it is necessary to call for surgical intervention. Gastroenterostomy seems to be the ideal surgical treatment for gastric ulcer. It places the stomach at rest, and in that way favors the formation of a firm clot in the bleeding vessel and this aids the healing of all ulcers. (Author's abstract.)

**Dr. F. W. Robbins** said that most cases with gastric perforation of 24 hours' duration were either dead or about to die. Perhaps the relief from pain following orthoform is due to the withholding of food. Operation should never be undertaken for hemorrhage in gastric ulcer.

**Dr. Kenneth Gunsolus:** Rectal alimentation is gradual starvation. Cures from operation on gastric ulcer are permanent, while 40 to 50 per cent of medical cures relapse. One patient lived two years on ice cream, and recovered.

**Dr. William Appelbe:** Cases of perforation that he had seen usually died in twenty-four hours. Relapsing cases should be operated.

**Dr. J. M. Swantz** referred to W. B. Cannon's radiographic investigations on the food stream in animals. This Boston work showed that gastroenterostomy does not divert the stream from es-

caping solely at the pylorus, unless the pylorus is stenosed. The benefit of this operation in gastric ulcer therefore cannot be in diverting the food from the ulcer, unless the pylorus is stenosed.

**Dr. W. J. Wilson, Jr.**, spoke of a diagnostic painful point to the left of the eleventh dorsal vertebra.

**Dr. Aaron:** Medical treatment of ulcer would be more frequently and permanently curative, if all food and drink were withheld a longer time. The mortality under medical treatment is exaggerated. The judicial stand to take seems to be to send to the surgeon those cases in which thorough medical treatment has failed, although there are certain cases which should be sent to the surgeon immediately.

'Meeting of Surgical Section, February 26, 1906. **Dr. N. E. Aronstam** read a paper: "The Rational Treatment of Urethritis."

The etiology of urethritis may be divided as follows:

- (1) Specific or microbic.
- (2) Non-specific or non-gonococcic.
- (3) Mechanic.
- (4) Diathetic or systemic.
- (5) Consecutive or secondary.

Urethritis is by no means a self-limited disease; its duration depends upon the particular etiologic factor, as well as upon the method of treatment.

The most rational treatment of the acute stage of gonococcic urethritis is that of irrigation, as first introduced by Valentine. The author has, however, utilized a procedure which for the lack of an adequate terminology he has designated the Modified Valentine's Treatment. With this method the average duration of acute gonococcic urethritis should not exceed three weeks, provided the patient has contracted the disease for the first time.

This treatment consists in flushing the urethra with a normal saline solution by means of a Valentine douche or a similarly devised apparatus. Not more than three pounds' pressure should be used. A soft rubber catheter encircles loosely the root of the penis, or the left hand of the operator may accomplish the same, while the right hand manipulates the valve. The slight constriction at the root of the penis prevents the current from passing the corresponding portion of the urethra, thus averting a possible invasion of the posterior urethra. Irrigations should be conducted, if possible, twice a day, for 5 minutes each seance. After the irrigation, the meatus is dried and 20 minims of the solution of adrenalin principle (1 to 1000) instilled in the canal by means

of a bulb eye-dropper, the meatus is then compressed and the solution kept within for at least 5 minutes, after which it is allowed to escape. After ten days, the saline is changed to a solution of potassium permanganate, in gradually ascending strength for about two weeks. Four results are thus achieved by this treatment:

- (1) Deterging of the urethra.
- (2) Astringent action—constriction of the peripheral vessels and the shutting off of a nutritive supply to the infectious agent.
- (3) By so doing it acts indirectly as a disinfectant.
- (4) Duration of the affection is decidedly curtailed without endangering the integrity of the urethra.

A word about the so-called alkaline diuretics. We are laboring under an erroneous conception of the exact action of these agents upon the urinary passages and the urine *per se*. When alkalies are absorbed their identity is completely destroyed, as far as the acid radicle is concerned; they are ultimately converted into normal salines or chlorides, and not carbonates, which are known to possess diuretic properties. It is by virtue of the latter that they exercise a beneficial effect upon the inflamed urethra, not, however, as alkalines, but as diluents and diuretics. (Author's abstract.)

**Dr. W. C. Martin** read a paper, entitled "Prostatitis and Its Treatment."

**Dr. R. S. Dupont:** Adrenalin in urethritis is entirely new to me, but seems reasonable. Any improvement on the prevailing, unsatisfactory methods would be welcome. The microscope is necessary to discriminate whether the fluid massaged from the prostate is from a healthy or a diseased gland.

**Dr. D. L. Walmsley** advised against any but the gentlest massage of the prostate.

**Dr. A. E. Carrier:** It was the custom, when I was a student in New York, forty years ago, to treat gonorrhea with nitrate of silver, 60 grains to the ounce. The penis was greatly swollen as the result of this treatment, but, when this had subsided, the patient seemed to be about cured. As the prostate consists in part of contractile muscle fibers, it is easily understood how massage assists the organ in its eliminative efforts.

**Dr. Wm. Appelbe:** Has found warm water with a little carbonate as beneficial an irrigant as any. Permanganate, 1 to 500, would seem to be too strong even at the end of a series of irrigations of increasing strength. Permanganate injections, used by men as prophylaxis, may cause a temporary non-specific discharge. Uses massage



in prostatitis, but not so often as every three days. In one instance, a gonococcal orchitis appeared in 1905 from a gonorrhea contracted before the Spanish war; if prostatic massage had been instituted just before the appearance of the orchitis, the orchitis might have been charged to the massage.

**Dr. L. J. Hirschman:** Had treated a number of patients with urethritis, who would submit to bed-confinement, by recumbency and normal saline, or boracic irrigations, and had apparently cured them in from ten to fourteen days.

**Dr. Aronstam:** In rare cases, the urethritis is secondary to a prostatitis, not the reverse, as usual. Cold sounds for prostatitis should be sterilized, lubricated with an antiseptic ointment, and allowed to remain 15 minutes, twice a day. Packing treatment of urethra to be condemned. Rectal examination in every case of posterior urethritis. Believes there is no congestive reaction after the use of adenaline.

W. E. BLOUETT, M. D.

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## Michigan Personals

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Dr. J. Pedden has been appointed to fill the unexpired term as city health officer of Petoskey, left vacant by the death of Dr. Calkins.

Among the physicians of the state who are interested in politics, may be mentioned, Dr. G. R. Herkimer, who is the democratic candidate for mayor of Dowagiac; Dr. W. M. Payne, who has been elected president of the village of Suttons Bay; Dr. A. W. Cooper, recently appointed postmaster of Fowlerville; Dr. Hugh Cary, elected president of the village of Delray, for the ten days before annexation to Detroit took place; Dr. E. B. Smith, candidate for the democratic nomination for mayor of Detroit; Dr. C. E. Spencer, who will be a candidate, this fall, for mayor of Port Huron; Dr. F. J. Clippert, who has been appointed a member of the Detroit water board, and Dr. George E. Heath, recently elected mayor of Monroe.

Dr. H. A. Moyer has recently been appointed health officer of Detroit.

Dr. M. P. Fenslow, of Escanaba, has been elected physician of Delta County.

Dr. Frederick Townsend, Sault Ste. Marie, has been appointed local surgeon of the Soo Line and the D. S. S. and A.

Dr. B. R. Corbus announces his retirement from the superintendency of the Alma Sanitarium, and

his location in Grand Rapids. Dr. E. P. Felch succeeds Dr. Corbus at Alma.

Dr. O. B. Fritch, Detroit College of Medicine, 1904, and Lillian A. Simmons, of Farmington, were married March 28th.

Dr. F. L. Morse, of Sebawa, has taken the practice of Dr. J. N. Day, of Lake Odessa. The latter expects to remove to Alma.

Dr. C. S. Cope, of Ionia, has been appointed medical examiner for the U. S. Marine Corps.

Dr. W. G. Hutchinson, of Detroit, has been commissioned by the governor, assistant surgeon of the First Battalion of the National Guard.

Dr. George S. Allen has removed from Albion to Grand Rapids.

Dr. Jason Morse, of the Eastern Michigan Asylum, has returned from a trip to Cuba.

Fire, on March 18th, damaged the residence of Dr. W. A. Crandall, of Hesperia.

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## Deaths

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Dr. W. H. M. Kyle, of Detroit, died in Palmerston, Ont., April 2nd. He was a graduate of Trinity College, Toronto.

Dr. G. H. Alway, of Gaines, died in Detroit, March 27th.

Dr. E. A. McEachren, a well known physician of Detroit, and a member of the Wayne County Society, died April 8th, after a lingering illness. After graduating from the Detroit College of Medicine in 1892, Dr. McEachren rapidly acquired a large practice. He was on the staff of the Harper Hospital Polyclinic.

Dr. Daniel L. Dakin, aged 69 years, one of Detroit's well known physicians, died April 2nd, of heart disease. The origin of the heart affection dates back to the civil war, when Dr. Dakin was badly injured by a bursting cannon ball, while assisting in burying a comrade. From that time his circulation has been impaired. Dr. Dakin was president of the Wayne County Society in 1891-2.

Dr. John W. Finch, aged 79, formerly a well known practitioner of Adrian, died during the past month.

Dr. C. S. Leonard, of St. Louis, died March 26th, of cerebral hemorrhage.

Dr. J. W. Crawford, an old time resident, and former prominent physician of Jackson, died March 24th.

Dr. Emma Cook, of Detroit, a graduate of the State University in 1892, died at her home in Detroit, April 14th. For eleven years she was state examiner for the order of Lady Maccabees.



Dr. Cook was born in Concord, Mich., and after her marriage, lived there until she began the study of medicine; since graduation she has practiced in Detroit. Dr. Henry S. Cook is her son.

At the age of 79, after 50 years' practice in Galesburg, Dr. Orrin W. Burroughs died April 16th. He was graduated from the medical department of the State University in 1854. One of his two sons succeeds to the father's practice.

## Obituary

**Dr. D. L. Howes.\***

BY R. G. DEAN, M. D., SOUTH LYON.

The recent death of Doctor Howes causes profound regret to all who knew him. He was a man of singular worth. Through his force of character, and skill as a physician and surgeon, he became widely and favorably known, and in many a family, he is held in honor, as the sympathizing friend and alleviator of distress.

He was a man of large size and striking appearance. His smooth, high, full forehead indicated intelligence and good judgment. He was a close observer, and could analyze and classify his observations so as to arrive at correct conclusions. His massive base of brain and neck, his broad and deep shoulders and chest showed that his splendid intelligence was supported by a strength of physical power that is seldom seen. But notwithstanding that he was one of nature's sterner kind, within this rugged exterior, there dwelt a kind and sympathetic soul, and the kindly light of a warm heart shone in his eyes.

His general appearance indicated a determination and fixedness of purpose, and an ability to bring to a successful termination any task in which he became engaged.

We go to the home of such a man, not to see his draperies and ornaments, nor even his pictures and books; these are all subordinate. We go to see *him*. As was said of an ancient prince, "The more you take from him, the more he seems to have, the greater he seems to be."

Although for some years, he had confined his practice mostly to office and consultation work, he still retained a deep interest in the families with whom he was acquainted during the years of his more active practice, and was always pleased to hear of their welfare.

A distinguished leader has passed away, leaving behind him a goodly heritage of a long and

useful and honorable life; honest, faithful, fearless, efficient, adequate.

Jonathan Howes, father of our subject, was a miller, millwright, and farmer. He was born in Norfolkshire, England, and after coming to America, spent ten years in Virginia, Georgia and Maryland, building grist-mills, which were operated by windmill power. He then went back to his native land and was married to Hannah Watts, who bore him six daughters and five sons. Of this family, Doctor Howes was the youngest, and there are three daughters and four sons still living. Some time after his marriage, Mr. Howes emigrated to Nova Scotia, later removed to New Brunswick, and finally to Ontario, Canada. In the county of Halton he bought three hundred and forty acres of land, on which he built the first mill in that county. He operated the mill and cleared and improved the land. He lived to the advanced age of 96 years, dying early in the fifties; his wife passed away in 1863, when 75 years old.

Doctor Howes was born in Canada, in 1835, his birthplace being the town of Trafalgar, county of Halton. He attended school in the county and then went to the high school at Oakville, and when his literary course was completed, entered the Toronto School of Medicine. He pursued his professional course there one term, then changed to Philadelphia, where he spent two years in close attention to the medical sciences in Jefferson College. He was graduated from that institution in 1864, but the next year returned in order to review his studies and take post-graduate lectures and clinical work. After this preparation for practice, he established himself in Oakville for one year, and in 1866 came to this state and county. He opened an office in New Hudson, Lyons township, which was the center of his practice for six years, after which he became a resident of South Lyon, in the same township.

Dr. Howes was married, in 1875, to Miss Alice P. Batty, who was born in Dunville, Canada, in 1849. Her father is James Batty, and she is the younger daughter in a family consisting of two daughters and one son. Doctor and Mrs. Howes have had but one child, a son, who died in infancy.

Some time after the death of their child, Mrs. Howes entered the medical department of the University of Michigan, at Ann Arbor, and was graduated from that institution in the class of 1882. For some years she was a practicing physician with an office in Detroit. She died a few months before her distinguished husband.

Doctor Howes took no particular interest in

\*Read before the Oakland County Medical Society, March 13, 1906.

politics, but found sufficient to occupy his time in professional study and practice and in the social pleasures to which he was drawn. Being a man of more than ordinary intelligence, with a pleasant, manly bearing, he was looked upon with respect and had a prominent place among the people with whom his lot was cast.

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### New Members of the State Medical Society For March, 1906.

Dr. E. J. Bernstein (Kal. Acad. of Med.), Kalamazoo, Mich.

Dr. W. H. Betteys (Houghton Co.), Hancock, Mich.

Dr. Joseph Foster (Ingham Co.), Lansing, Mich.

Dr. Herbert W. Landon (Ingham Co.), Lansing, Mich.

Dr. A. T. Laberge (Houghton Co.), Laurium, Mich.

Dr. D. K. Macqueen (Houghton Co.), Laurium, Mich.

Dr. Joseph E. Marshall (Shiawassee Co.), Durand, Mich.

Dr. J. E. Maxwell (Kal. Acad. of Med.), Decatur, Mich.

Dr. H. M. Joy (Houghton Co.), Calumet, Mich.

Dr. Bret Nottingham (Ingham Co.), Lansing, Mich.

Dr. G. M. Reese (Houghton Co.), Calumet, Mich.

Dr. Joseph Verchillini (Houghton Co.), Calumet, Mich.

Dr. W. W. Whitten (Houghton Co.), Baltic Mine, Mich.

Dr. C. S. Norton (Wayne Co.), Detroit, Mich.

Dr. M. C. McDonnell (Huron Co.), Bad Axe, Mich.

Dr. W. F. Morrison (Huron Co.), Pigeon, Mich.

Dr. E. F. Shaw (Ingham Co.), Williamston, Mich.

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## Medical News

### THE BOSTON SESSION OF THE AMERICAN MEDICAL ASSOCIATION.

The Boston session of the American Medical Association will be the largest ever held. There is no doubt of it. It will be forty-one years since the Association met in New England, and the historical attractions will, of themselves, be suf-

ficient to draw many to the meeting. The members of the profession from New York—city and state—will go as they have never gone before. From the South, the Southwest and the extreme West, there are more inquiries about railroad rates, accommodations at Boston, etc., than in any other year. New England itself is also being heard from in a way to show that it will be unusually well represented at the session. The officers of nearly all the sections report programs unusually early and more evidence of interest in scientific work. While the passenger associations have not acted definitely, those in authority have given assurances that half rates will prevail, with the extension of time to those who want to extend their visit in New England. It is hoped that provisions will be made to accommodate those who want to go by one route—say by the lakes—and return by another. Many foreigners have already accepted invitations to attend, among them Professor Trendelenburg, Leipzig, Germany; Mr. Reginald Harrison, London, Eng.; Professor von Rosthorn, Heidelberg, Germany; Professor Dührssen, Berlin, Germany, and Professor von Frey, Würzburg, Germany. Hence we repeat: The Boston session of the American Medical Association will be the largest ever held—and the Boston people know it and are acting accordingly. Committees have been working for months making preparations, and they promise good accommodations and a thoroughly interesting and profitable time to all who attend.—*Journal American Medical Association.*

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Examinations to the number of 1,770 were made by City Bacteriologist Williams of Grand Rapids during the year ending March 31, 1906.

These figures are given in Dr. Williams' annual report to the board of health. The examinations were three times the number made in 1905, and more than eleven times the number made in 1903. Dr. Williams' comments: "This comparison is tangible evidence that the laboratory is growing more useful to our city each year. Compared with ten other cities of approximately our population we lead by more than twice the number of examinations made annually."

Of the examinations made during the year 1,330 were diphtheritic, 194 tubercular, 70 typhoid, 81 renal, 82 well water, 13 miscellaneous.

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Phenacetine sells in the United States for \$1 an ounce, and in Canada for 15 cents an ounce. This anomaly is due to our patent laws. A bill has recently passed the House of Representatives, which will prevent such unjust discrimination in future, if it becomes a law.

# PROGRAM

## OF THE

# 41st Annual Meeting

OF THE

## Michigan State Medical

## :: Society ::

At the Elks' Temple,  
Jackson, Mich.

Wednesday, Thursday and Friday  
May 23, 24 and 25, 1906



### THE COUNCIL.

ELKS' TEMPLE.

Chairman—C. B. BURR, Flint.  
Secretary—W. H. HAUGHEY, Battle Creek.

*Tuesday, May 22nd, 7:30 P. M.*

*Wednesday, May 23rd, 2 P. M.*

*Thursday, May 24th, 2 P. M.*

Organization and Election of Officers.

to the House of Delegates each year one delegate and one alternate for every 50 members, and one for each major fraction thereof; but each County Society holding a charter from this Society, which has made its annual report as provided in this Constitution and By-Laws, shall be entitled to one delegate and one alternate.

**First Day, Wednesday, May 23rd.**

8:30 A. M.

### HOUSE OF DELEGATES.

ELKS' TEMPLE.

President—DAVID INGLIS, Detroit.

State Secretary—BENJAMIN R. SCHENCK, Detroit.

BY-LAWS—CHAPTER IV, Section 1. Each Component County Society shall be entitled to send

1. Call to order by the President.

2. Roll Call.

3. Reading of Minutes of the last Annual Meeting.

4. Report of the Council.

C. B. BURR, Flint, Chairman.



5. Report of Committee on Legislation and Public policy.

W. H. SAWYER, Hillsdale, Chairman.

6. Report of National Legislative Council, A. M. A.

FLEMMING CARROW, Detroit, Michigan Member.

7. Miscellaneous Business.

(a) Election of Committee on Nominations to nominate:

1st, 2nd, 3rd and 4th Vice-Pres.

2 Representatives in House of Delegates,  
A. M. A., for 2 years.

To fix place of meeting for 1907.

(By-laws., Chapt. VI., Sec. 2 (as amended June 12, 1903).)

The House of Delegates shall elect, annually, at its first meeting, a Nominating Committee of Five from the House of Delegates, no two of whom shall be from the same Councilor District.)

(b) Appointment of other Working Committees.

(c) Proposal of Amendments to the Constitution.

Proposal of Amendments to the By-Laws.

*Adjournment to the General Meeting.*

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### Second Day, Thursday, May 24th, 1906.

9 A. M.

1. Reading of the Minutes of the Previous Meeting.

2. Unfinished Business.

(a) Amendments to By-laws (if any) proposed at previous meeting.

3. Report of Committee to Encourage the Systematic Examination of the Eyes and Ears of School Children Throughout the State.

WALTER R. PARKER, Detroit, Chairman.

4. Report of the Committee on the Patent Medicine Evil.

C. B. STOCKWELL, Port Huron, Chairman.

5. Miscellaneous Business.

*Adjournment to General Meeting.*

### Third Day, Friday, May 25th, 1906.

9 A. M.

1. Reading of the Minutes of the Previous Meeting.

2. Report of Committee on Nominations.

3. Unfinished Business.

4. Report of Committee on Vital Statistics.

H. B. BAKER, Lansing, Chairman.

5. Miscellaneous Business.

*Adjournment to General Meeting.*

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### GENERAL MEETING

ELKS' TEMPLE

President—DAVID INGLIS, Detroit.

State Secretary—BENJAMIN R. SCHENCK, Detroit.

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### First Day, Wednesday, May 23rd.

10:30 A. M.

1. Call to Order.

2. Prayer.

REV. R. E. McDUFF, Jackson.

3. Address of Welcome.

HON. W. W. TODD, Mayor of Jackson.

4. Address of Welcome in Behalf of the Profession.

A. E. BULSON, Councilor, 2nd District.

5. Report from the House of Delegates.

B. R. SCHENCK, Detroit, State Secretary.

6. Address of the President.

DAVID INGLIS, Detroit.

Subject—*Education.*

7. Miscellaneous Business.

(a) Nomination of President for 1906-1907.

*Adjournment.*

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### Wednesday Evening, May 23rd.

7:30 P. M.

(Under the auspices of the Surgical Section, continuing the symposium of the afternoon session.)

Address JOHN B. MURPHY, Chicago.  
 "The Lymphatic Relations of the Liver, Bile  
 Tract and Peritoneal Surfaces."

Discussion (5 minutes).

Max Ballin, Detroit; T. A. McGraw, Detroit; W.  
 T. Dodge, Big Rapids; Hal C. Wyman, Detroit;  
 H. O. Walker, Detroit.

After the address and discussion, there will be  
 an informal reception and dancing.

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### Second Day, Thursday, May 24th.

10:30 A. M.

1. Unfinished Business.
2. Report of the Committee on Venereal Pro-  
 phylaxis.  
 A. E. CARRIER, Detroit, Chairman.

3. Oration on Surgery.  
 A. W. CRANE, Kalamazoo.

Subject—*Gastro-enteroptosis. Illustrated by  
 X-Ray Plates in a Darkened Room.*

Synopsis—Various means of diagnosis.  
 Normal position of Stomach and Colon.  
 Types of Gastroptoses with associated signs  
 and symptoms. Types of Enteroptoses  
 with associated signs and symptoms. Sur-  
 gical aspects.

4. Oration on Medicine.  
 Subject—*Small Hospitals for Small Places.*  
 B. H. McMULLEN, Cadillac.

Synopsis—Introduction. Statistics of the  
 smaller Hospitals of Michigan. Their con-  
 struction, growth, management, etc. The  
 important part they should take, in the fu-  
 ture, in the better care of the sick and  
 wounded. Importance in the medical train-  
 ing of the profession in the community. Ne-  
 cessity for the establishment of small Hos-  
 pitals in all country towns, having over 5,000  
 inhabitants. How best established. Ex-  
 perience in Cadillac.

5. Miscellaneous Business.

*Adjournment.*

### Thursday Evening, May 23rd.

8 P. M.

Social evening. Music and refreshments. The  
 profession of Jackson county has provided a most  
 liberal entertainment for this session.

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### Third Day, Friday, May 25th.

10:30 A. M.

1. Unfinished Business.
2. Report from the House of Delegates.  
 B. R. SCHENCK, Detroit, Secretary.
3. Oration on Obstetrics and Gynecology.  
 E. T. ABRAMS, Dollar Bay.  
 Subject—*American Gynecology.*
4. Miscellaneous Business.

At 12 o'clock, noon, the Committee on Nom-  
 inations will announce the result of the  
 ballot for President.

5. Introduction of the President-elect.  
*Adjournment.*

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### SECTION ON GENERAL MEDICINE

ELKS' TEMPLE

Chairman—HERMAN OSTRANDER, Kalamazoo.  
 Secretary—R. S. ROWLAND, Detroit.

On account of the length of the program, and  
 in order to give every one an opportunity, the  
 fifteen minute rule will be enforced. This will  
 not apply to the papers in the symposium.

The Secretary of the Section will collect all  
 papers as soon as read.

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### First Day, Wednesday, May 23rd.

2 P. M.

1. Conclusions Drawn From Three Years' Ex-  
 perience in the Serum Treatment of Acute  
 Articular Rheumatism.  
 G. H. SHERMAN, Detroit.

2. The Etiology of Otitis Media.  
O. A. GRIFFIN, Ann Arbor.
3. Systemic Disturbances Secondary to Pathologic Conditions in the Nose.  
J. E. GLEASON, Detroit.
4. The Therapeutic Value of Rectal Tampons.  
J. A. MACMILLAN, Detroit.
5. Galvanic Treatment of Some of the Common Diseases of the Anus and Rectum.  
WM. L. DICKINSON, Saginaw.
6. Present Day Treatment of Pulmonary Tuberculosis.  
VICTOR C. VAUGHAN, Ann Arbor.  
Discussion—E. L. Shurly, Collins H. Johnson.
7. Relation Between Anemia and Early Stages of Tuberculosis, with Reference to Treatment by Hypodermic Medication.  
B. R. SHURLY, Detroit.
8. Diabetes Mellitus.  
W. H. BILLS, Allegan.
6. The Difficulties Encountered in the Study of Insanity.  
HIRAM A. WRIGHT, Detroit.
7. Gastro-intestinal Conditions in Pernicious Anemia.  
HUGO A. FREUND, Ann Arbor.
8. Gastro-genic Diarrhea.  
CHARLES D. AARON, Detroit.

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### Third Day, Friday, May 25th.

2 P. M.

#### Symposium—Chronic Non-tuberculous Joint Diseases.

1. Etiology, with Remarks on the Importance of Metabolism.  
A. W. IVES, Detroit.
2. Pathology.  
A. S. WARTHIN, Ann Arbor.
3. Classification and Treatment.  
W. E. BLODGETT, Detroit.
4. Clinical Demonstration of Cases.  
GEORGE DOCK, Ann Arbor.

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### Second Day, Thursday, May 24th.

2 P. M.

1. The Occult Blood Tests in Clinical Medicine, with Special Reference to Their Importance in Diseases of the Digestive System. Urine Segregation by Means of Kidney Massage. Report of a Case of Tuberculosis of the Kidney, with Special References to Differential Leucocyte Examination in Urine Sediment.  
DAVID M. COWIE, Ann Arbor.
2. Rural City Milk Supplies. Their Relation to Infant Feeding, with Special Reference to the Importance of Milk Analysis by the Physician. (From the Department of Pediatrics, University of Michigan.)  
ANNA M. COOK and D. M. COWIE, Ann Arbor.
3. Cerebral Arterial Sclerosis in Relation to Mental Diseases.  
A. M. BARRETT, Ann Arbor.
4. Syphilitic Cerebral Endarteritis, with Some Remarks on Syphilis of the Nervous System.  
JOHANN FLINTERMANN, Detroit.
5. Border Line Cases of Neurasthenia.  
CHARLES H. HITCHCOCK, Detroit.

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### SECTION ON SURGERY, OPHTHALMOLOGY AND OTOTOLOGY

ELKS' TEMPLE

Chairman—E. C. TAYLOR, Jackson.  
Secretary—F. J. LEE, Grand Rapids.

On account of the length of the program, and in order to give every one an opportunity, the fifteen-minute rule will be enforced. This will not apply to the papers in the symposium.

The Secretary of the Section will collect all papers as soon as read.

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### First Day, Wednesday, May 23rd.

2 P. M.

"Symposium on Surgery of the Glandular System, with special reference to early surgical diagnosis and surgical treatment."



1. The Salivary and Cervical Glands and Thyroid.

MAX BALLIN, Detroit.

Discussion opened by J. H. Kellogg, Battle Creek.

2. The Mammary and Axillary Glands.

THEODORE A. MCGRAW, Detroit.

Discussion opened by C. G. Darling, Ann Arbor.

3. The Kidney and Its Appendages.

W. T. DODGE, Big Rapids.

Discussion opened by D. E. Robinson, Jackson.

4. Spleen, Pancreas and Intestinal Glands.

HAL C. WYMAN, Detroit.

Discussion opened by S. C. Graves, Grand Rapids.

5. Genito—Urinary and Ingunial Glands.

H. O. WALKER, Detroit.

Discussion opened by F. W. Robbins, Detroit.

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### Wednesday Evening, May 23rd.

7:30 P. M.

6. The Lymphatic Relations of the Liver, Bile Tracts and Peritoneal Surfaces.

JOHN B. MURPHY, Chicago.

Discussion, Max Ballin, Detroit; T. A. McGraw, Detroit; W. T. Dodge, Big Rapids; Hal C. Wyman, Detroit; H. O. Walker, Detroit. (5 minutes each.)

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### Second Day, Thursday, May 24th.

2 P. M.

1. The Use of Bone Pins in the Treatment of Ununited and Compound Fractures.

A. I. LAWBAUGH, Calumet.

2. The Use of Local Anaesthesia in the Treatment of Rectal and Anal Disease."

L. J. HIRSCHMAN, Detroit.

3. Urethral Diverticuli and Cul-de-sacs.

N. E. ARONSTAM, Detroit.

4. Dietetic Treatment after Gastro-enterostomy.

J. H. KELLOGG, Battle Creek.

5. The Nephro-colic Ligament: Its relation to Nephroptosis, and its Utilization in the Surgical Treatment of Floating Kidney.

H. W. LONGYEAR, Detroit.

6. Remarks on the Etiology and Clinical Features of Acute Septic Peritonitis.

THOMAS C. IRWIN, Grand Rapids.

7. Transplantation of Skin; Adaptation of Tagliacozza's Method; Skin Grafting.

ANGUS MCLEAN, Detroit.

8. The Surgical Treatment of Septic Conditions in the Middle Ear and Mastoid.

DON M. CAMPBELL, Detroit.

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### Third Day, Friday, May 25th.

2 P. M.

1. Clinical Report of an Unusual Case of Cholelithiasis.

JOHN N. BELL, Detroit.

2. Iodized Cat Gut.

W. T. DODGE, Big Rapids.

3. The Diagnostic Value of the Blood-count in Acute Abdominal Conditions.

T. A. MCGRAW, JR., Detroit.

4. The Treatment of Fractured Patella

C. S. OAKMAN, Detroit.

5. Disturbances in Distant Parts of the Body due to Eye-Strain.

J. C. HUIZINGA, Grand Rapids.

6. Some Types of Cases of Chronic Middle Ear Suppuration and their Relation to the Total Opening of the Middle Ear Cavities (radical operation).

EMIL AMBERG, Detroit.

7. A Plea for Conservative Surgery with a Review of the Quackish Methods Used to Obtain the Patient's Confidence and Later Operative Work.

WM. J. DUBOIS, Grand Rapids.

8. Concerning the Treatment of Tetanus.

W. H. HUTCHINGS, Detroit.

## SECTION ON GYNECOLOGY AND OBSTETRICS

ELKS' TEMPLE

Chairman—FLORENCE HUSON, Detroit.  
Secretary—W. H. MORLEY, Ann Arbor.

On account of the length of the program and in order to give every one an opportunity, the fifteen minute rule will be enforced. This will not apply to the papers in the Symposium.

The Secretary of the Section will collect all papers as soon as read.

### First Day, Wednesday, May 23rd.

2 P. M.

1. Pregnancy, Diagnosis; Hygiene of Pregnancy, Delivery and After Treatment.  
F. A. WEAVER, Charlotte.
2. A Case of Eclampsia After the Delivery of Twins. Remarks on the Etiology and Pathology of the Disease.  
C. G. PARNALL, Ann Arbor.
3. Some Factors in Volitional Control During Labor.  
J. E. DAVIS, Detroit...
4. Operations Upon the Pelvic Organs During Pregnancy.  
S. E. SANDERSON, Detroit.
5. Cesarean Section for Centrally Implanted Placenta Previa with Report of Case.  
J. G. LYND, Ann Arbor.

### Second Day, Thursday, May 24th.

2 P. M.

#### Symposium on Puerperal Sepsis.

1. Etiology and Prophylaxis.  
J. B. WHINERY, Grand Rapids.
2. Symptoms and Diagnosis.  
W. H. SAWYER, Hillsdale.

### 3. Medical Treatment.

J. E. MAXWELL, Decatur.

### 4. Surgical Treatment.

G. C. HAFFORD, Albion.

### Third Day, Friday, May 25th.

2 P. M.

### 1. Colon Disease in Women.

The symptoms, causes, consequences and rational treatment of dilatation and prolapse of the colon in women.

J. H. KELLOGG, Battle Creek.

### 2. What the Gynecologist may do to relieve mental symptoms.

JAS. W. McMEekin, Saginaw.

### 3. The Curse of Miscarriages to Our American Women with a few suggestions in the way of a Remedy.

F. J. W. MAGUIRE, Detroit.

### 4. Repair of the Perineum.

W. H. HAUGHEY, Battle Creek.

### 5. Version in Midwifery.

E. G. EDWARDS, Grand Rapids.

### OFFICERS OF THE SOCIETY.

DAVID INGLIS, President.....Detroit  
ARTHUR H. HUME, First Vice-President.....Owosso  
A. W. HORNOGEN, Second Vice-President.....Marquette  
FLORENCE HUSON, Third Vice-President.....Detroit  
N. S. McDONALD, Fourth Vice-President.....Hancock  
B. R. SCHENCK, State Secretary.....Detroit  
GEO. W. MORAN, Treasurer.....Detroit

#### Board of Councilors and Councilor Districts

Term Expires

First—W. J. HERDMAN.....1909....Ann Arbor  
Second—A. E. BULSON.....1907.....Jackson  
Third—W. H. HAUGHEY, Secretary...1909....Battle Creek  
Fourth—A. H. ROCKWELL.....1911....Kalamazoo  
Fifth—R. H. SPENCER.....1911....Grand Rapids  
Sixth—C. B. BURR, Chairman.....1909.....Flint

Seventh—M. WILLSON .....1911....Port Huron  
Eighth—S. I. SMALL.....1907.....Saginaw  
Ninth—B. H. McMULLEN.....1907.....Cadillac  
Tenth—C. H. BAKER.....1911.....Bay City  
Eleventh—W. T. DODGE.....1909....Big Rapids  
Twelfth—THEO. A. FELCH.....1907.....Ishpeming

FIRST DISTRICT—Lenawee, Macomb, Monroe, Oakland,  
Washtenaw, Wayne.

SECOND DISTRICT—Branch, Hillsdale, Ingham, Jackson.

THIRD DISTRICT—Calhoun, Cass, Eaton, St. Joseph.

FOURTH DISTRICT—Allegan, Berrien, Kalamazoo, Van Bu-  
ren.

FIFTH DISTRICT—Barry, Ionia, Kent, Ottawa.

SIXTH DISTRICT—Clinton, Genesee, Livingston, Shiawas-  
see.

SEVENTH DISTRICT—Huron, Lapeer, Sanilac, St. Clair.

EIGHTH DISTRICT—Grafton, Isabella, Midland, Saginaw,  
Tuscola, Clare and (Gladwin unattached).

NINTH DISTRICT—Benzie, Charlevoix, (including Antrim),  
Grand Traverse, (including Leelanaw), Kalkaska,  
Manistee, Mason, Missaukee, Wexford.

TENTH DISTRICT—Alpena, (including Alcona), Bay, (in-  
cluding Arenac and Iosco), Cheboygan, Emmet, O.,  
M., C., O., R., O., (Otsego, Montgomery, Crawford,  
Oscoda, Roscommon and Ogemaw combined), and  
Presque Isle.

ELEVENTH DISTRICT—Mecosta, Montcalm, Muskegon, (in-  
cluding Oceana), Newaygo, Osceola, (including Lake).

TWELFTH DISTRICT—Chippewa, (including Luce and Mack-  
inac), Delta, Dickinson-Iron, Gogebic, Houghton, (in-  
cluding Baraga, Keweenaw and Ontonagon), Mar-  
quette, (including Alger), Menominee, Schoolcraft.

**OFFICERS OF SECTIONS**

**General Medicine**

H. OSTRANDER, Chairman.....Kalamazoo  
R. S. ROWLAND, Secretary, 1905-1907.....Detroit  
B. H. McMULLEN, Orator.....Cadillac

**Surgery, Ophthalmology and Otology**

E. C. TAYLOR, Chairman.....Jackson  
F. J. LEE, Secretary, 1905-1907.....Grand Rapids  
A. W. CRANE, Orator.....Kalamazoo

**Obstetrics and Gynecology**

FLORENCE HUSON, Chairman.....Detroit  
W. H. MORLEY, Secretary, 1905-1907.....Ann Arbor  
E. T. ABRAMS, Orator.....Dollar Bay

**Delegates to the American Medical  
Association**

H. O. WALKER, term expires 1907.....Detroit  
V. C. VAUGHAN, term expires 1907.....Ann Arbor  
W. K. WEST, term expires 1906.....Painesdale

CHAS. B. STOCKWELL, term expires 1906.....Port Huron  
**Michigan Member of the National Legislative  
Council of the American Medical Association**  
FLEMMING CARROW .....Detroit

**PERMANENT COMMITTEES**

**On Scientific Work**

DAVID INGLIS, Chairman.....Detroit  
B. R. SCHENCK, State Secretary.....Detroit  
E. C. TAYLOR.....Jackson  
FLORENCE HUSON .....Detroit  
R. S. ROWLAND.....Detroit  
F. J. LEE.....Grand Rapids  
W. H. MORLEY.....Ann Arbor

**On Arrangements**

D. E. ROBINSON, Chairman.....Jackson  
N. H. WILLIAMS.....Jackson  
E. C. TAYLOR.....Jackson  
T. S. LANGFORD.....Jackson  
R. GRACE HENDRICK.....Jackson

**On Scientific Exhibit**

A. S. WARTHIN, Chairman.....Ann Arbor  
P. M. HICKEY.....Detroit  
D. M. COWIE, Secretary.....Ann Arbor

**On Legislation and Public Policy**

W. H. SAWYER, Chairman.....Hillsdale  
JAMES W. INCHES.....St. Clair  
D. B. CORNELL.....Saginaw  
F. B. TIBBALS.....Detroit

**On Vital Statistics**

H. B. BAKER, Chairman.....Lansing  
G. G. BARNETT.....Ishpeming  
A. H. ROCKWELL.....Kalamazoo

**On Venereal Prophylaxis**

A. E. CARRIER, Chairman.....Detroit  
W. J. HERDMAN.....Ann Arbor  
A. P. BIDDLE.....Detroit

**SPECIAL COMMITTEES**

**To Encourage the Systematic Examination of the  
Eyes and Ears of School Children  
throughout the State**

WALTER R. PARKER, Chairman.....Detroit  
C. H. BAKER.....Bay City  
JOHN R. ROGERS.....Grand Rapids

**On the Patent Medicine Evil**

C. P. STOCKWELL, Chairman.....Port Huron  
GEORGE H. HAFFORD.....Albion  
WM. F. BREAKEY.....Ann Arbor



MISCELLANEOUS.

Headquarters—Elks' Temple.  
All meetings will be held on Central Standard Time at the Elks' Temple.  
The Commercial Exhibits will be found in the City Council Chamber, corner Cortland and Mechanic streets, a short block from the Elks' Temple.  
All meetings will be called to order promptly. The program is long. Those who are to read papers should carefully note the time and be present.  
Do not fail to register at the Elks' Temple. Only members registered are entitled to vote.  
The ballot box for the presidential election will be found at the Elks' Temple.

BY-LAWS—CHAPTER III., SECTION 5.

All papers read before the Society shall be its property. Each paper read *shall be deposited immediately with the Secretary*, but the author may also publish the same in any reputable journal not published in this State, provided the printed article bears the statement that it was "read before the Michigan State Medical Society."

ENTERTAINMENT.

The Profession of Jackson County will make ample provision for the comfort and entertainment of the visiting members.  
**Special arrangements have been made for the entertainment of visiting ladies.**

HOTELS.

*Otsego Hotel*.....Cor. Main and Francis  
Rates: \$3.00, \$3.50, \$4.00.  
*Hotel Ruhl*.....391-323 E. Main  
Rates: \$2.00.  
*Hotel Blackman*.....178-184 W. Main  
Rates: \$2.00.

*Storwell House*.....E. Main opp. Union Depot  
Rates: \$2.00.  
*Lynn Hotel*.....410-412 E. Main  
Rates: \$1.00, \$1.25.  
*American House*.....325 E. Main  
Rates: \$1.00, \$1.25.  
*Park Hotel*.....224-226 W. Main  
Rates: \$1.00, \$1.25.  
*The Dalton*.....Cor. Main and Francis  
Rates: European plan. For men only.

REDUCED RAILROAD RATES.

One and one-third fare for the round trip.  
When conventions of regularly organized Societies are held in Michigan, at which *not less than one hundred persons* are in attendance, who present certificates issued by the lines of the Central Passenger Association, or lines of other Passenger Associations co-operating with the same, certifying that they have paid full fare of not less than 75 cents each to the place of meeting, the return of such parties is authorized at *one-third the first-class limited fare*, via the route traversed in going to the meeting, provided the rules are complied with and the Secretary of the Convention fills in the certificates at the point at which the Convention is held, certifying that the holders thereof have been in actual attendance upon the Convention.  
Tickets for return journey will be furnished only on certificates dated not more than THREE DAYS before the date the Convention assembles, not more than TWO DAYS after the first day of the meeting, and presented within THREE DAYS after its adjournment (it is understood that Sunday will not be reckoned as one of the three days either before the opening date or after the closing date of meeting), and all return tickets will be for continuous passage; no stop-over privileges being allowed on tickets sold at less than regular unlimited fares.  
Blank Certificates are kept on hand by Ticket Agents of all lines in the lower peninsula of Michigan, and will be furnished by them upon application at the time tickets are purchased.  
*"No refund of fare can be expected because of failure of the parties to obtain Certificates."*  
**A charge of 25 cents will be made at the meeting at Jackson by Special Agent for each certificate issued by him.**

# Delegates to Annual Meeting

...of...

## MICHIGAN STATE MEDICAL SOCIETY at Jackson

May 23, 24 and 25, 1905

County.	Delegate.	Alternate.
ALPENA.....		
BARRY.....	J. W. RIGTERINK, Hastings.....	CHARLES RUSSELL, Hastings.
BAY.....	R. W. BROWN, Bay City.....	M. GALLAGHER, Bay City.
BENZIE.....	E. J. C. ELLIS, Benzonia.....	C. P. DOYLE, Frankfort.
BERRIEN.....		
BRANCH.....		
CALHOUN.....	G. B. GESNER, Marshall.....	None.
CASS.....	J. H. JONES, Dowagiac.....	E. A. PLANCK, Union.
CHARLEVOIX.....		
CHEBOYGAN.....		
CHIPPEWA.....	FRED'K TOWNSEND, Sault Ste. Marie.....	E. H. WEBSTER, Sault Ste. Marie.
CLINTON.....	W. H. GALE, St. Johns.....	W. A. SCOTT, St. Johns.
DELTA.....	GEORGE BJORKMAN, Gladstone.....	W. J. LAIRD, Nahma.
DICKINSON.....		
EATON.....	P. H. QUICK, Olivet.....	W. H. RAND, Charlotte.
EMMETT.....	JOHN REYCRIFT, Petoskey.....	G. W. NIHART, Petoskey.
GENESEE.....	J. H. BUCKHAM, Flint.....	E. D. RICE, Flint.
GOGEBIC.....	J. B. MOORE, Ironwood.....	
GRAND TRAVERSE.....		
GRATIOT.....	E. A. BAGLEY, Alma.....	I. N. BRAINARD, Alma.
HILLSDALE.....		
HOUGHTON.....		
HURON.....		
INGHAM.....	J. F. CAMPBELL, Lansing.....	S. H. CULVER, Mason.
IONIA.....	C. S. COPE, Ionia.....	C. B. GRAUSS, Palo.
ISABELLA.....		
JACKSON.....	C. H. LEWIS, Jackson.....	N. H. WILLIAMS, Jackson.
KALAMAZOO ACADEMY OF MEDICINE.....	F. A. WALSH, Kalamazoo.....	O. F. BURROUGHS, Plainwell.
	A. W. CRANE, Kalamazoo.....	W. DEN BLYKER, Kalamazoo.
KENT.....	R. R. SMITH, Grand Rapids.....	G. L. MCBRIDE, Grand Rapids.
	N. M. SWITZER, Grand Rapids.....	E. M. MCCOY, Grand Rapids.
LAPEER.....	G. W. JONES, Imlay City.....	ADAM PRICE, Almont.
LENAWEE.....	L. S. TOWN, Geneva.....	
LIVINGSTON.....	W. C. HUNTINGTON, Howell.....	ALEX. H. PEARSON, Hamburg.
MACOMB.....	JAMES YATES, Roseville.....	G. H. BERRY, Mt. Clemens.
MANISTEE.....	W. E. COATES, Manistee.....	R. F. FOSTER, Bear Lake.
MARQUETTE.....	H. W. SHELTON, Negaunee.....	J. H. ANDRUS, Negaunee.
MASON.....		
MECOSTA.....	L. S. GRISWOLD, Big Rapids.....	J. B. CAMPBELL, Stanwood.
MENOMINEE.....		
MIDLAND.....		
MONROE.....	JEROME VALADE, Monroe.....	C. T. SOUTHWORTH, Monroe.
MONTCALM.....	W. P. GAMBER, Stanton.....	D. K. BLACK, Greenville.
MUSKEGON.....	W. L. GRIFFIN, Shelby.....	J. OOSTING, Muskegon.
NEWAYGO.....	W. A. KUHN, White Cloud.....	CHARLES WHITEHEAD, Newaygo.
OAKLAND.....	M. W. GRAY, Pontiac.....	C. J. SUTHERLAND, Clarkston.
O., M., C., O., R., O.....		
OSCEOLA.....	H. L. FOSTER, Reed City.....	G. F. FIELDS, Chase.
OTTAWA.....	H. KREMERS, Holland.....	D. G. COOK, Holland.
PRESQUE ISLE.....	D. C. HOWELL, Onaway.....	JOHN YOUNG, Onaway.
SAGINAW.....	W. L. DICKINSON, Saginaw.....	B. B. ROWE, Saginaw.
SANILAC.....	L. E. COCHRAN, Peck.....	S. B. YOUNG, Melvin.
SCHOOLCRAFT.....	G. M. LIVINGSTON, Manistique.....	C. S. LAYTON, Blaney.
SHIAWASSEE.....	T. N. YOUNMAN, Bancroft.....	J. C. TUFFORD, Owosso.
ST. CLAIR.....	A. E. THOMPSON, St. Clair.....	ALEX. MACKENZIE, Port Huron.
ST. JOSEPH.....	J. R. WILLIAMS, White Pigeon.....	BLANCHE M. HAINES, Three Rivers.
TRI-COUNTY.....	S. E. NEIHARDT, South Boardman.....	P. W. PEARSALL, Kalkaska.
TUSCOLA.....	A. L. SEELEY, Mayville.....	A. N. TREADGOLD, Cass City.
	R. B. CANFIELD, Ann Arbor.....	JOHN A. WESSINGER, Ann Arbor.
WASHTENAW.....	JAMES F. BREAKEY, Ann Arbor.....	ANDROS GULDE, Chelsea.
	W. S. ANDERSON, Detroit.....	D. M. CAMPBELL, Detroit.
	P. M. HICKEY, Detroit.....	M. V. MEDDAUGH, Detroit.
	L. J. HIRSCHMAN, Detroit.....	R. B. HOYT, Detroit.
WAYNE.....	EMIL AMBERG, Detroit.....	C. S. OAKMAN, Detroit.
	W. H. HUTCHINS, Detroit.....	W. E. BLODGETT, Detroit.
	D. R. CLARKE, Detroit.....	J. E. DAVIS, Detroit.
	LOUISE R. THOMPSON, Detroit.....	MINTA P. KEMP, Detroit.

## Progress of Medical Science

### MEDICINE.

Conducted by

H. S. OLNEY, M. D.

**Fever in Tertiary Syphilis.**—CARPENTER calls attention to the difficulty in the diagnosis of fever in tertiary syphilis. He illustrates this point by giving the history of two cases recently observed. The first patient was a man twenty-four years old, who was admitted to the hospital with remittent fever, said to have been contracted at Panama. He was treated with quinine and arsenic. He denied syphilis. The plasmodium of malaria was not found and quinine was stopped. Fowler's solution, with an iron tonic pill, was given. Night sweats with occasional chills developed. The tubercle bacillus was searched for with negative results. Still later a slight swelling over the sternal notch was noticed and the patient reluctantly admitted having had an attack of syphilis four years before. Specific treatment was instituted, and an exploratory incision was made, revealing a pocket of thin brown pus at the sternal attachment of the sternocleidomastoid muscle. The necrotic parts were removed. In a few weeks a small ulcer of the velum palati appeared. With a mixed treatment containing mercury, it was noted that whenever the dose was moderately increased, the lesions seemed to become aggravated. Observations of these cases show the necessity of administering mercury with caution. Both of the patients whose histories are here reported improved more rapidly when potassium iodide was used alone. As the danger of large doses of mercury in syphilitic cachexia was realized, and since its use was regarded as a necessity in the cure of the disease, it was only after repeated trials in both of these cases that the true value of the iodide was appreciated.—*Medical Record*, March 17, 1906.

**Prophylaxis of Lobar Pneumonia.**—ANDERS believes the prevalence of the disease is much influenced by indoor conditons, especially such as obtain during the cold season. Effective prophylaxis embraces four main objects: (a) The thorough disinfection of pneumonic sputum as well as that of healthy persons, including the secretions of the upper air-passages; (b) isolation and disinfection of the sick chamber, together with its contents, after death or recovery; (c) the removal of personal pre-disposition, and (d) the introduction of certain public measures. Thorough and prompt sterilization of pneumonic

sputum and of the secretions from the upper respiratory tract and then the prompt destruction of the same by burning is a matter of first necessity. Disinfection of the bed-linen and body-linen, the mattress and the room occupied by the pneumonia patient is also a primary requisite. These matters do not receive the rigid care and attention which they richly merit by the average general practitioner. The public measures of greatest value may be summarized as follows: The issuance of drastic edicts against spitting on the sidewalks; the work of street cleaning and street sprinkling should be looked after by bureaus or boards of public health, to whom should be given full executive authority; there should be greater diffusion of popular information concerning efficient ventilation of our office buildings, theatres, courts of justice, manufacturing establishments, churches, public schools, and passenger and street railway cars, and also regarding details connected with the subject of the prevention of lobar pneumonia stating simple, plain facts about the way in which the disease is spreading.—*American Medicine*, March 31, 1906.

**Acute Dilatation of the Stomach.**—HERRICK reports two cases of acute gastric dilatation, one of which terminated in recovery. The value of the succussion sound in diagnosis is emphasized. He is convinced that the treatment used in this successful case was life saving. It consisted in frequent gastric lavage, use of normal salt solution hypodermically and by the rectum, nutrient enemas and hypodermic use of strychnin and digitalin. He also used a binder in his cases, which he thinks possibly helped somewhat, at least, by keeping the stomach in its proper place.—*Jour. A. M. A.*, March 31, 1906.

**Ice Bags and When to Use Them.**—The value of ice bags, especially in acute inflammations due to bacterial invasion, is emphasized by AURNES. To be efficient there should be constant drainage from the bag in order to keep the temperature that of melting ice, and he describes a drainage ice bag of his own invention specially devised for pneumonia cases. Among the diseases in which ice bags are of great importance as an auxiliary remedy the following may be mentioned: Acute meningitis, acute mastoid disease, acute tonsillitis, lobar pneumonia (with marked success), acute pleurisy, acute endocarditis and myocarditis, acute hepatitis, acute gastritis, acute rheumatic arthritis and acute synovitis, acute enterocolitis, acute peritonitis and acute pelvic diseases, acute cystitis, acute appendicitis (of great benefit), hemoptysis, hematuria, typhoid fever (to head and abdomen), scarlet fever (to head), erysipelas (to region involved), neuralgia and headache.—*Jour. A. M. A.*, March 24, 1906.



## SURGERY.

Conducted by

MAX BALLIN, M. D.

**Gonorrheal Exostosis of the Os Calcis.**—

BAER reports six cases in which he found an exostosis at the tubercle of the os calcis. Severe pain in walking is the chief symptom of the peculiar affection; the pain is limited to the area of the exostosis. There is an enlargement of the heel due to thickening of the periosteum on both sides of the os calcis. Motions of the foot are not limited. The presence of the exostosis causes a characteristic gait. The patient walks more on his toes than on his heels. The affection was always bilateral and occurred in men between the ages of 18 and 30 years. In five of the six cases a definite history of gonorrhea was given; the gonorrhea preceded the affection from three to nine months. In the sixth case, the patient gave a history of a suppurating bubo, and a pure culture of gonococcus was obtained at the operation upon the heels. Four of the other cases were examined bacteriologically. Only the one mentioned gave the gonococcus in pure culture; in two other cases the cut section showed an organism which morphologically resembled the gonococcus in all respects. Radiographs of all cases showed a distinct exostosis at the tubercle of the os calcis. The size of the exostosis varied from that of a pea to that of a marble. All treatment other than operative interference, such as rest, hot air, etc., has failed. Removal of the exostosis was successful in all five cases operated upon.—*Surgery, Gynecology and Obstetrics*, February, 1906.

**Alimentary Treatment of Biliary Fistula After Cholecystostomy.**—

JABOULAY and FIXIER recommended first in 1902, a very simple method to stop the too free flow of bile after cholecystostomy. Under the condition that there are no stones left in the common duct, abundant flow of bile from the gall-bladder fistula can be prevented by making the patient eat something every three hours—day and night. Frequent eating prevents stagnation of bile in the gall-bladder, by inducing discharge of bile into the intestine. The physiologic principle of this treatment is clear and simple; also material experience in treatment of several cases seems to prove that the idea is correct.—(H. Gross, *Centralblatt fuer Chirurgie*, 1906. No. 7.)

**The Treatment of Diffuse Septic Peritonitis.**

—ROBERT G. L. CONTE is in favor of Murphy's procedure in operating for general peritonitis and

records two such cases, caused by appendiceal perforation, which were successfully treated after this method. The essentials of Murphy's technic are: (1) The rapid elimination of the cause of the peritonitis, whether it be an intestinal perforation, a gangrenous appendix, etc. This must be done with the least possible handling of the peritoneal contents. (2) Drainage by tube of the lowest portion of the pelvis, through a suprapubic opening, and free drainage through the incision. (3) Elimination of all time consuming procedures at the time of operation. No sponging off of the intestines, no investigation of the peritoneal cavity. (4) Semi-sitting posture after the operation—the so-called Fowler posture. (5) The absorption of large quantities of water through the rectum. This water is discharged by the peritoneum and freely drained through the wounds, and also increases diuresis. For this purpose, a nozzle is introduced into the rectum, connected by a tube with a rubber bag, that is elevated but a few inches above the rectum. In this way from a pint to a quart of water should be allowed to trickle in during an hour, and is easily absorbed by the rectum. (6) Prevention of peristaltic movements of the intestines by withholding all food from the mouth and, if needed, by opiates.—(*Annals of Surgery*, February, 1906.)

**Relation of the Thyroid Gland to Infection and Intoxication.**—

Acute infectious disease, especially scarlet fever, can produce changes in the thyroid gland, a hyperemia, liquifaction and disappearance of the colloid substance, and desquamation of the epithelium. The connective tissue is not altered. Chronic alcoholism causes the same histologic changes in the thyroid gland. Tuberculosis of the lungs causes, in many cases, increase of the connective tissue of the gland and slow disappearance of the follicles. Chronic nephritis, cachexia from cancer and sarcoma do not cause any changes in the thyroid.—(J. Sarbach, *Mitteilungen aus den Grenzgebieten der Medizin und Chirurgie*. Vol. 15, Part 344.)

## GYNECOLOGY AND OBSTETRICS.

Conducted by

REUBEN PETERSON, M. D.

**Gonorrhea in Women.**—FINDLEY says the anatomic recognition of gonorrhea of the urogenital tract may be impossible, particularly in cases of long standing. For this reason the diagnosis must occasionally rest upon the finding of an inflammatory lesion in one or more portions of the tract and associating these lesions with a history of exposure to gonorrheal infection. A diagnosis that admits of no doubt can only be based upon the finding of the gonococcus in the secretions or tissues. This is by no means easy in the chronic stages when there is little or no secretion, and the organism, which at best is recognized with difficulty in the tissues, is found in small numbers or may be wholly wanting. The small size of gonococci and their scarcity in the tissues of chronic cases may necessitate the microscopic examination of a large number of sections. This involves rare skill in technic, not only in the preparation of the sections, but in the differentiation of the gonococcus from other cellular structures. Grave mistakes have been made in diagnosis by assuming that no infection exists because the usual complaints of an acute infection do not appear in the history. Since the cure of gonorrhea is so unsatisfactory, and when deeply seated is usually only accomplished by a mutilating operation which too often unsexes the woman, prophylaxis becomes the paramount issue in the management of gonorrhea of women. Unfortunately, it is not alone the laity which is in need of education in this respect; the profession is often guilty of being too hasty in pronouncing a cure and in giving sanction to marriage and to the resumption of the marital relation. Untimely interference with uterine and urethral applications in the early stage of the disease too often causes an extension of the infection and makes a serious lesion of what might otherwise have been a self-limiting disease.—*American Medicine*, March 17, 1906.

**Injury to the Parturient Canal.**—FOTHERGILL, in reporting these cases of injury to the parturient canal, seeks to show that under some circumstances, such injuries occur when no serious cause of dystocia exists.

In the first case, the patient was delivered with forceps, after manual rotation of the head which

was in a posterior position. Manual removal of the retained placenta showed a tear in the posterior vaginal fornix, through which protruded several loops of bowel. A hand in the peritoneal cavity, showed the whole of the descending colon, together with the sigmoid flexure, filled with hardened feces. The mass thus formed was as large and thick as a man's arm. The patient was too weak for radical measures and only treatment by gauze drainage could be employed. Death ensued six days later. The tear was probably caused, not from the forceps, but by the unusual friability of the tissues and the enormous accumulation of feces in the colon and rectum.

In the second case, bimanual removal of an adherent placenta, following the expulsion of a nineteen weeks' old fetus resulted in a tear which separated the posterior lip of the cervix from the vaginal wall. The rent extended from the right vaginal fornix around the back of the cervix, well forward into the left fornix. The peritoneum was stripped off the back of the uterus but the peritoneal cavity had not been opened. The patient recovered after the cavity was lightly packed with gauze.

In the third case, rupture of the lower uterine segment, followed the use of a Campetier de Ribe's bag. The latter was used to dilate the cervix with a view of emptying a seventh month pregnant uterus which contained a decomposed fetus. The bag was left in position eight hours and then dilatation brought to completion by gentle traction on the stalk of the bag. The use of the curette, the following morning brought down into the vagina, a portion of the maternal omentum. The abdomen was opened, and the omentum ligated above the point where it entered the uterus. The rent was found to be just above the cervix, in the lower uterine segment. The several fragments of the omentum were pushed down into the vagina, the ends of the rupture were brought together and a gauze drain inserted through the rent into the vagina. The patient recovered. The rupture may have occurred while introducing the bag or while making traction on the bag in order to effect dilatation. In the last two cases, prolonged bleeding may have given rise to the same defect in the uterine tissues which were the predisposing cause of the lacerations described. In all *probability*, a toxemia is the underlying feature common to the these cases.

## PATHOLOGY AND BACTERIOLOGY

Conducted by

A. P. OHLMACHER, M. D.

**Miliary Tuberculosis.**—RIBBERT discusses the theory of Weigert that miliary tuberculosis is due to a sudden invasion of numerous tubercle bacilli into the blood current. From his investigations he thinks otherwise; if such a sudden invasion does occur, it is the exceptional way of infection. He describes at length the minute miliary tubercles found on the intima of some of the smallest blood vessels (endangitis tuberculosa), and regards these as the connecting links between the primary focus of infection and the miliary tuberculosis. He thinks that small numbers of tubercle bacilli get into the blood stream and lodge in the walls of the vessels, thus forming the intima tubercles; here the germs grow and multiply and then may invade other parts of the body by way of the blood stream.—*Deutsche Med. Wochenschrift*, 4 Jan. '06.

**Pyemia, With the Report of an Interesting Case in Which the Autopsy Revealed Toxemia Rather than Pyemia.**—PEYTON reports an interesting case in a boy of 12, of what appeared to be pyemia following operation for appendicitis. It was thought that multiple metastatic abscesses existed in the liver. The autopsy revealed extensive adhesions between the intestines, while the left lobe of the liver and the stomach and spleen were all so firmly adhered in a general mass that in the effort to separate them the liver tissue was broken down. It was scarcely possible to find any place in the abdominal cavity where adhesions did not exist. Several small pockets of pus were found irregularly deposited in the peritoneal cavity on the left side, walled in by the parietal peritoneum and the stomach, left lobe of the liver and spleen. These adhesions were all remarkable for their exceeding firmness and extensiveness, and in many instances it was impossible to break them down without extensive destruction of tissue. At no time after the author first saw the patient would it have been possible to have accomplished anything or done any good by a free incision for the purpose of evacuating any of these pus cavities. The examination of the liver and spleen, as well as other organs, was negative, so that the autopsy, instead of revealing the existence of pyemia, proved the case to have been one rather of toxemia and that these pockets or accumulations of pus were the result of nature's efforts to wall off this pus and protect the system against its absorption.—*American Medicine*, March 17, 1906.

**The Blood Plates.**—KEMP, CALHOUN and HARRIS give the results of their enumeration of the blood plates in various conditions of altitude, disease, etc. The various methods and fluids that have been employed are thoroughly discussed and criticized, the one employed by the authors being a solution of formalin in a 1 per cent. solution of sodium chlorid, in the proportion of 1 to 15, and colored as desired with methyl green or violet. Their method is given in detail, and is claimed to be practical and accurate to such a degree as to be of value in detecting changes in the blood in pathologic cases. They think that the widely varying results obtained by others in physiologic conditions have been due largely to the methods, and also to the season and locality in which the counts were made. The ratios determined by them in winter in human blood were almost invariably higher and more constant than those obtained in summer. The same is true of those at high altitudes, but here the red cells were also increased. They review the results of various authorities in pathologic conditions, and from the mass of evidence believe that three important generalizations can be culled. The first relates to acute infectious fevers; during their course the number of the blood plates is usually subnormal or normal, but if the fever breaks by crisis it is accompanied by a rapid and striking rise of the number of blood plates. Most observers agree to this, and without exception in the case of typhoid. The second generalization concerns the anemias. There is a remarkable agreement in the belief that the plates are not diminished in the secondary anemias; indeed, they are reported increased in most cases. In pernicious anemia, on the other hand, they are always greatly diminished, and their count is, therefore, of great importance in the diagnosis of the case. Lastly, in purpura hemorrhagica the blood plates are enormously diminished in number, and the few that are found are often of large size. This scarcity of the blood plates and slowness of the blood to clot are given by Hayem as the pathognomonic and constant signs of the disease. The authors believe that further investigations of the blood plates, in fevers especially, would lead to valuable results, besides being of use for the diagnosis and prognosis of the cases under observation.—*J. A. M. A.*, April 7-14, 1906.



## PHARMACOLOGY AND THERAPEUTICS.

Conducted by

C. W. EDMUNDS, M. D.

**Medical Management of Nephritis.**—In acute nephritis, TYSON advises (1) rest in bed; (2) diet, mainly of milk with water plain, carbonated or vichy; (3) brisk purge, calomel or salines; (4) sweating; (5) occasionally, diuretics, potassium acetate or better, the citrate in from X-XV gr. doses every two hours. In chronic nephritis, rest in bed would aid but is often impossible. Life in a warm climate is also frequently out of the question. Many times all that can be done is to regulate the diet and to give advice as to avoidance of the strenuous life. As to diet, vegetables are allowed, as a rule, but meat in only small amounts and not more than once daily. About three pints of milk daily. Alcohol, tea and coffee are usually best avoided. Restriction of sodium chloride and of water may be useful in certain cases. The use of drugs in this condition is very limited, except for symptomatic treatment. In cases of arterio-sclerosis, the iodides may be good, and at least do no harm. Opium is to be avoided if possible, or at least given with great care, especially in cases of contracted kidney.

For albuminuric retinitis, TYSON thinks his use of mercury biniodid is justified.—*N. Y. Med. Jour.*, V. 83, p. 221.

**Iodide Excretion in Men.**—WITT carried out a series of experiments upon the course of excretion of potassium iodide in men. He administered 1.3 G. of potassium iodide (1 G. iodine, in water) early in the morning, after the bladder had been emptied. Following the administration, the urine was passed every two hours until 11 p. m. He found the greatest excretion took place in the first two hours, due to the rapid absorption into the previously iodine-free blood and the increased kidney activity resulting therefrom. During the second day, the excretion showed a characteristic curve; increase in the morning hours, 9-11, the amount running parallel to the other urinary constituents. During the morning, the taking of food caused no alteration in the rate of excretion, while in the afternoon and evening, it caused a great elevation in the curve. Artificial stimulation of the kidney, by sodium chloride, caused the same changes in the morning as in the afternoon.—*Inaug. Dissert.*, Griefswald, 1905.

**Nocturnal Enuresis.**—DE BOINVILLE, after considering the various etiologic factors causing this disagreeable symptom, discusses its treatment. First, of course, treat the underlying cause, if it can be found. Pin worms, irritation of the vulva or penis from any cause should be treated. Distention of the rectum, producing pressure on the bladder, is a frequent cause and many cases may be cured by evacuation of the bowel before going to bed. The evening meal should be of easily digested food and should not contain any coffee or tea to act as a diuretic.

To prevent the patient lying on his back, a hard object may be so tied that it will rouse the patient when he turns on his back. Of drugs, DE BOINVILLE recommends two especially. First, belladonna, which should be given in the form of the tincture and in two doses, one after the evening meal and again on retiring. The dose should be increased daily until the pupils show moderate dilatation and after its continuance for about two weeks, it may be stopped. Nux vomica is also very useful in many cases, but must be given carefully. Narcotics are to be avoided. Other drugs occasionally useful, are urotropin and antipyrine.

In obstinate cases, cauterization of the urethra with silver nitrate may be necessary.—*Practitioner*, V. 76, p. 396.

**Obstetrical Use of Ergot.**—In the symposium on this subject, DAVIS says he uses ergot, in some form, in the majority of labor cases, the only contraindication being excessive hemorrhage, in which case, he uses saline transfusions and strychnine, as the ergot seems to increase the work of the weakened heart. He does not give ergot until the child is born and the placenta is almost ready for expulsion. He has never seen any untoward effects from the drug. Hirst employs ergot in all cases of labor giving it as soon as the child is born. The only contraindication he recognizes, is persistent vomiting, but even in these cases the drug is usually well tolerated, if labor is over.

Cameron's custom is to use ergot in all cases, unless there is especial contraindication. He never gives it until the uterus is completely emptied. Cales uses it in all cases, but never until the uterus is empty.

Krusen does not believe the drug should be given as a routine practice but only when contraction of the uterus is not satisfactory.—*Therapeutic Gazette*, V. XXX., p. 1.

## NEUROLOGY.

Conducted by

C. W. HITCHCOCK, M. D.

**Nerve Transplantation in Selected Cases of Cerebral, Spinal, and Peripheral Palsies and Athetosis.**—"A new field seems to have been opened in the treatment of selected cases of paralysis, whether they are of cerebral, spinal, or peripheral nerve origin, and also in the treatment of athetosis," says W. C. SPILLER. Results have already been encouraging in cases of acute anterior poliomyelitis and the procedure would seem more advantageous than a tendon transplantation since, if the operation be successful in bringing diseased peripheral nerve fibres into unison with healthy nerves and thereby restoring function, paralyzed muscles would be thus restored.

This plan, suggested by SPILLER, in 1902, was tried and a case reported by J. K. Young in 1903 and later by C. H. Frazier, together with a case operated upon by the latter. The chief dangers in anterior poliomyelitis are delayed union and overgrowth of connective tissues in the nerve at the site of operation.

When the fibers are small, a longitudinal splitting of the healthy nerve and the insertion of the diseased fibres within the slit, would seem to give adequate opportunity for the desired union.

Partial paralysis is common in anterior poliomyelitis, and in quite a large proportion of cases the dorsal flexors of the foot have suffered. Hence the lower limbs have been chiefly the site of this operation although paralysis of the upper limbs is amenable to like treatment.

DR. SPILLER reviews some of the literature and thinks that the operation of nerve transplantation for acute anterior poliomyelitis, when the paralysis is not too extensive, is now passing beyond the experimental stage.

In the case of athetosis, some function having returned and there being a resulting hyperaction of certain muscles, e. g., the flexors, it seemed that, if some of the hyper-innervation could thus be switched off to extensors, a better balance might result and the result be a happy gain.

DR. SPILLER had a suitable case, upon which Dr. Frazier operated and which he exhibited to the American Neurological Association, in June, 1905, although only 2½ months after operation. Even then, there was a distinct return of power, although function was not normal. The patient has now returned to his occupation of selling papers, very happy in his improvement. It is believed that athetosis will not return. Analyzed, this is an attempt to influence central lesion by disturbing peripheral nerve.

(Experimental operations as to nerve anastomosis were performed on dogs and are detailed.)

Dr. Frazier, the surgeon who operated, reports this case of athetosis: Patient, age 19, is said to have fallen upon his back when 8 months old, but nothing abnormal was noted until he was two years old, when beginning athetoid movements were observed. The cortical center for the left upper extremity had been later excised. The upper limbs were in constant violent spasm and presented intense athetoid movements in all parts.

March 16th, 1905, the first operation consisted in lateral anastomosis of the divided (left) median and ulnar nerves with the musculo-spiral. April 8th, patient felt greatly improved, athetoid movement remaining practically in shoulder muscles only. April 17th, left circumflex and musculo-cutaneous nerves were divided and distal end of each inserted into central end of the other. July 10th, tactile sensation seemed lost in ulnar side of palm and on anterior surface of forearm. Patient has partial flexion of the fingers.

It remains to be seen just what the ultimate result will be. Interesting problems are suggested as to what would be the effect of central stimulation of the nerves with which the impaired nerves have been anastomosed. There remains some stiffness of the entire left arm, but there is very little jerking. He can partially flex all the fingers and can flex the wrist almost to a right angle. Athetoid movements in the right shoulder still persist. The return of power is not so good in the right arm as in the left.

A most interesting field certainly is here opened up.—*American Jour. of Med. Sciences*, March, 1906.

**Phenomena of Consciousness.**—Consciousness necessitates cortical integrity. While biologic activity awakens, a little after birth, evidences of co-ordination, there is nothing psychic in the actions of the new-born. This activity is reflex, purely, while that of consciousness must be known of its subject. Toward the fifth or sixth month, manifestations are observed which may be termed psychologic, elementary forms of phenomena, which taken together betoken consciousness. Anatomic development corresponds with the growing complexity of cortical activity.

A series of gradual developmental and evolutionary stages is then noted, which correspond to the development and functioning of anteriorly located centers.

With the child, states of consciousness, that is to say, apparent knowledge of itself, appear to exist a few days after birth, but as this really involves a higher cortical development than thus early exists, it really is toward the fifth or sixth month that one may properly speak of elementary consciousness in the child.—*Archives de Neurologie*, October, 1905.



## LARYNGOLOGY.

Conducted by

J. E. GLEASON, M. D.

**Indikationen zur Kurativen Tracheotomie bei der Kehlkopftuberkulose.**—HENRICI presents the subsequent history of three cases of tuberculosis of the larynx first published in 1903 (*Arch. fur Laryngol.* 15-2), which were cured by tracheotomy, and reports a fourth case of tuberculosis involving the anterior and posterior surfaces of the soft palate, the edges of the anterior pillars, the epiglottis and the left false vocal cord. After nearly a year's treatment by extirpation, curettage and applications of lactic acid, the laryngeal condition had retrograded, and the soft palate showed no tendency to heal. Tracheotomy was then performed, the canula being worn for five months. Improvement was immediate, and nine months later there was practically no trace of existing disease. From analysis of these four cases, all strikingly similar clinically, for a curative tracheotomy the Author concludes that the patient must be under 20 years of age. During this period of life, ability to overcome tuberculosis is most marked, and tracheotomy is proportionately best borne. Changes in the lungs must be absent or insignificant. Fever and progressive loss of weight are contraindications. The tuberculosis must be relatively benign, with a tendency to infiltration rather than to ulceration. Cases which coincide to these limitations respond better to tracheotomy than to any other form of treatment.—*Arch fur Laryngol.* 18-1.

**Ueber Tonsiltuberculose, ein Weiterer Beitrag zur Behandlung mit Neutuberculin.**—REUNERT reports the following case of tuberculosis of the tonsil, in addition to which, beside a clinically insignificant lung affection, changes were present in other parts of the lymphatic system. The patient, a woman of 28 years, had been losing weight during the previous four months, and was suffering from increasing weakness. Two weeks before presenting herself, she developed a sore throat, which gradually increased in severity until she was able, only with the greatest difficulty, to take liquid nourishment. Examination showed the entire pharynx congested, and the left tonsil entirely covered with a white homogeneous adherent mass. Both submaxillary glands were enlarged, the left being sensitive to pressure. Physical examination showed an enlarged gland in the right axilla, slight roughened breathing over the right apex, and a plainly palpable spleen. There was neither cough nor pyrexia. Cover glass prep-

arations made from the tonsil showed tubercle bacilli, their presence being confirmed later by animal experiment. Treatment with new tuberculin was instituted, according to Hippel's method, without any local medication. After the fifth injection (3/500 mg.) the intensely sore throat was relieved, the weight increasing one kilogram in the fourteen days. After the fifteenth injection (3/50 mg.) the spleen was scarcely palpable. Although several slight relapses occurred, the general progress was constant. The maximal dose of one mg. of the tuberculin was reached in about three months, and was continued for about two months, after which time the patient was discharged as cured. The throat was normal, the spleen was not palpable, the glands were considerably reduced and no longer sensitive, and the weight had increased. The author analyzes this case as one of primary bronchial gland tuberculosis, with secondary lymphatic infection of the tonsils by a retrograde movement of the lymph stream. The striking result of the treatment is worthy of note compared to other forms of tubercular tonsillar therapy.—*Deut. Med. Woch.* Jan. 18, 1906.

**The Larynx in Typhoid Fever.**—JACKSON carefully studied the condition of the larynx in 360 cases of typhoid fever seen in hospital practice, and concludes that serious and even fatal local lesions occur much more frequently than is realized. 2227 cases (63%) showed subacute laryngitis without loss of substance. Ulcerative laryngitis was present in 68 cases (18.9%). In 17 cases, there was perichondritis, six complicated by necrosis. The parts of the larynx involved in ulceration, with the exception of the vocal cords, which seemed to be immune, were directly proportional to the distance from the mouth, the epiglottis being most frequently affected. The extent of the laryngeal involvement was in direct proportion to the severity of the general infection. Ulceration developed in only one case prior to the twenty-first day. Cultures showed a mixed pyogenic infection. The symptoms most frequently noted were hoarseness, and then aphonia. However in the eight cases saved by tracheotomy, on account of the general toxæmia, four presented no local symptoms, in three there was a slight forced respiratory effort and cyanosis, and only one struggled for breath. The author is convinced that routine examination of the larynx will save cases whose loss is now attributed to collapse.—*American Journal Medical Sciences*, November, 1905.



## GENITO-URINARY SURGERY.

Conducted by

W. A. SPITZLEY, M. D.

**The Treatment of Impotency by Resection of the Vena Dorsalis Penis.**—Upon the introduction of this procedure some years ago, this operation, like all surgical innovations, promptly became a fad. It appealed both to the commercial surgeon and to many conservative surgeons, who were ready to grasp at anything which promised relief in this annoying class of cases. Soon the operation had an enthusiastic lot of advocates, who claimed prompt and wonderful results from it, and from the "improved" operation of "subcutaneous ligation," instead of resection of the dorsal vein; it also had many opponents who quite as vociferously claimed its worthlessness.

The author endeavored to satisfy himself of the true state of affairs and his observations and conclusions are based upon 100 cases which came under his observation, and with which he has kept touch after operation. The operation, he believes to be not so very simple after all; subcutaneous ligation of the vena dorsalis penis, without injury to other important vascular and nerve structures, is a surgical impossibility; it must be done through an open wound.

Ligation of the superficial penile veins is simple enough, but it is of no avail in securing relief; the deep vein is the important structure to be ligated.

Objection is made that in many cases the impotency, and therefore the benefit of operation as well, is purely psychic; this the author believes is no objection at all, if the results to the patient are satisfactory, since, as he graphically puts it, "No amount of argument as to the potential power is sufficient to offset the demoralizing effect of dynamic incapacity;" in other words, the patients desire ability to have erection, no matter what the psychology of the condition is.

Beside the psychic effect, which perhaps accomplishes the most good, the erectile power of the penis is increased by the less rapid return flow of blood which has entered the organ. Provided the arterial supply is proper, this lessened outflow must have material effect on erectile power. The author's conclusions state comprehensively the result of his observations:

(1) The resection of the vena dorsalis penis in treatment of impotency is an operation requiring accurate anatomic knowledge, and cannot be done subcutaneously without serious danger of injury to important parts or total failure of the operation, even granting that it is practicable, which I do not believe it is.

(2) The operation, while not essentially dangerous, is neither so simple nor so easily performed as has been claimed.

(3) The location of the dorsal vein is such that careful and painstaking dissection is necessary for its ligation\* or resection.

(4) The ligation of the superficial penile veins has been often performed by those who claimed that they had ligated the dorsal vein proper. This operation upon the superficial veins is often essential to a complete operation, but when performed alone is futile.

(5) The operation is beneficial in very many cases on strictly psychic grounds, but this does not militate against the advisability of its performance. The important thing for the patient is a restoration of function.

(6) In some cases of impotency of organic origin, the operation is not to be thought of, but in quite a wide range of cases of the kind the operation is successful, firstly, because of its mechanical effect; secondly, because of its psychic effects.

(7) One of the most important elements in the cure of impotency by a properly performed resection of the vena dorsalis penis is the demonstration of the dynamic capacity through purely mechanical circulatory agencies.

(8) The mechanical conditions thus secured are permanent in quite a large proportion of cases.

(9) In cases of complete impotency, which are not dependent upon irremediable local causes of functional disturbance of innervation the operation is apparently successful in fully 50% of the cases, and beneficial in probably one-half of the remainder.

(10) In by far the majority of cases of impotency that come under the observation of the surgeon a trial of this operation is justifiable.—*Lydston, Intern. Jour. Surg.*, March, 1906.

**Max Nitze.**—Professor Max Nitze, of Berlin, inventor of the cystoscope, died of apoplexy on the twenty-fourth of February. He was born in Dresden in 1848 and received his medical education at the University of Heidelberg, Wurzburg and Leipzig. In 1874 he received an appointment as assistant medical officer at the Municipal Hospital in Dresden, where he made the first attempt to examine the interior of the bladder by endoscopy. From Dresden he went to Vienna, where he continued his researches and finally, with the technical aid of Leiter, the Viennese instrument maker, he evolved the first cystoscope. His own studies with this instrument were published in his classic *Handbook of Cystoscopy* and his *Atlas of Cystoscopy*.

Less frequently used by the profession at large, than the laryngoscope or the ophthalmoscope, less startling than the discovery of the Röntgen rays, the cystoscope must nevertheless be ranked with these other means of securing images of interior surfaces of the body. It has become an indispensable aid in the diagnostics of diseases of the urinary tract, and has contributed probably more than any other one factor to the development of the modern conceptions and modern treatment of these diseases.

The medical profession will hold in reverence the memory of Max Nitze—(*American Jour. of Surg.*, April, 1906.)

## OTOLOGY.

Conducted by

EMIL AMBERG, M. D.

**The Present Status of Otology.**—HOLINGER states that the chapters of otology which have advanced the most in the last two decades, are pathology and diagnosis. Bezold, fifteen to twenty years ago, gave really far reaching view-points. His views were more strongly supported, the more microscopic anatomy and pathology were systematically worked out by Professor Siebenmann. Many pathologic findings which were formerly considered very frequent causes of deafness, were revealed as rare and exceptional, and others took their place, which, years ago, simply could not be recognized, on account of incomplete microscopic technic. As to anatomy, and physiology, this most important fact was discovered, that the bony capsule of the labyrinth is, as to its nutrition and function, rather a part of the middle ear than of the inner ear. Its diseases must, therefore, be added to those of the middle ear. This discovery cleared up a number of disputable points of pathology and diagnosis.

Tuberculosis is a more frequent cause of supuration than was suspected. All changes of the labyrinth are divided into acquired and congenital. The acquired diseases are located in the nervous elements. The acquired changes, i. e., those of the nervous elements, show all different stages from acute neuritis to extensive degeneration into connective tissue. We find round cell infiltration of the cochlear and vestibular nerve, or interstitial neuritis, diminution of axis cylinders and of the ganglionic cells in the spiral ganglion and the end branches of the cochlear nerve, or atrophy of the nerves. Parenchymatous, as well as interstitial changes, may be caused by general diseases, like typhoid fever, diphtheria, mumps, measles, scarlet fever, small-pox, whooping cough, pneumonia, erysipelas, sepsis, influenza, rheumatism, diabetes, myxedema, marasmus and cancer, and finally by systemic general poison, like alcohol and nicotine, and by poisons which act mainly on the acoustic nerve, as salicylic acid and quinin.

Different groups and types are formed which will greatly facilitate further studies. These works could not, but have practical consequences. One of them was the complete change in the education of deaf mutes. It showed that real congenital deaf mutes, with very few exceptions, have much better hearing than those with acquired deafness, and after comparatively short training, many may participate in oral instruc-

tions in the regular public schools.

Combinations of affections of the middle ear and of the labyrinth are frequent, but how much deafness is due to the middle ear and how much to the labyrinth is often difficult to decide. Within a few months an up-to-date text book by Professor Siebenmann will appear, which will contain an elaborate presentation of this newer otology.—*Illinois Medical Jour.*, February, 1906.

**The Oto-rhinologic School Examinations of the Years 1902-1905.**—Bezold regards only those children as hard of hearing who have less than one-third of the normal acuteness, that means a hearing distance for whispered voice less than eight meters. He found that 25.8% children (representing 20.75% ears) were hard of hearing. Among 9,342 hearing organs, Denker found 25% hard of hearing; Nadoleczny found 34.3% among 426 hearing organs. Ostman and Laubi found in hearing organs which are hard of hearing: Wads of carumen 9.9% (Laubi 6.5%) symptoms of closed tubes and atrophy 43.9% (Laubi 51.1%) cicatrix with circumscribed atrophy, with or without calcification and slight retraction 11.0%; tendon like opaqueness and loss of lustre resp. chronic middle ear catarrh (Laubi) 12.4% (Laubi 5.4%), chronic suppuration 3.7% (Laubi 2.4%), dry perforation resp. residue of suppuration (Laubi), 2.3% (Laubi 16.2%, acute inflammation 1.5% (Laubi 0.4%), deafness without any objective signs 15.1% (Laubi 14.4%). Frankenberger found among 4,777 children in 13.2% deviation of the septum. Burger collected statistics of mirror—or digital—examinations of children for adenoids and found that the average percentage of adenoids among 13,283 examined children was 30.2%. Bjoern found 37.6% by digital examination. The examination carried out by the government of the Netherlands through teachers gave among 800,000 children, based on external signs and subjective symptoms a percentage of 6% suffering from adenoid vegetations. Burger thinks that 30% would be more correct. The experienced investigation by physicians would give such a figure.—NADOLECZNY, *Internationales Centralblatt fuer Ohrenheilkunde*, February, 1906.

**Brain Abscess.**—GRANT, of London, says that suppuration of the labyrinth may frequently cause abscess of the brain. (Hinsberg, 12.5%, Whitehead, 54%.) In cases of abscess of the brain without sinusphlebitis, drainage must be procured through the median anterior wall of the antrum and the labyrinth must be opened.—*Arch f Ohrenheil*, Vol. 65.



# The Journal of the Michigan State Medical Society

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## Original Articles

### EDUCATION.\*

#### The Presidential Address of 1906.

DAVID INGLIS, M. D.,

Detroit.

Members of the State Medical Society:—

It has seemed to me that no subject better deserves our attention than that of education.

We are carried along by the great currents of social evolution. Today the trend of all things, all activities, is toward concentration of power—toward co-operation of many men for common purposes. A medical education today means the power of large capital; none but schools wealthy enough to provide many and expensive facilities can long survive. The steady increase in requirements for graduation, and particularly for State registration, is bringing it about that young men cannot afford to attend poorly equipped schools. The poorly equipped school is doomed.

Medical education also means today not only abundant and varied clinical instruction, but that form of clinical instruction in which the student comes in close and personal contact with the pa-

tient; has a personal part in the clinical diagnosis and treatment.

This is quite a different thing from viewing a patient in the pit of an amphitheatre from far away benches.

Such clinical teaching means that the teaching staff of a medical college must be greatly increased; many men must co-operate to teach clinical medicine, not alone in class rooms, but particularly in hospital wards and dispensary offices. Small groups of students, many teachers and actual daily bedside study of the sick. The whole scheme of college training must grow.

One teacher of physiology can give to a large class little more than a re-statement of the facts in the text book. Indeed the text book statement is often more exact and complete. The thing cannot be otherwise. No one man can adequately cover the field of physiology. There should be not one, but several teachers of physiology.

The same holds true of pathology, of surgery, of practice.

To make the growth produce the best results, the State examination must be-

\*Delivered at the 41st Annual Meeting of the Michigan State Medical Society, Jackson, May 23-25, 1906.



come the objective point of a student's work, and the examinations shall go beyond tests of memory, and require proof that the students have been taught to think,—to apply the facts learned in the laboratories, the facts learned from lectures and reading, to the conditions of the sick.

It may be said that such a program is difficult, but the practice of medicine is difficult. It is high time that incompetent men,—dull men, blunderers, are kept from entering a profession which has no place for them, where incompetency and blundering are terribly disastrous.

In medical teaching, this is well worth considering.

So great have been the advances in the study of pathology and physiology that we are apt to forget the final use of these advances. Until the developments of pathology and physiology are joined to clinical medicine and surgery they are useless.

In College instruction and in medical societies and medical journals, this fact is too often forgotten. There must come, and there should come now, a reaction so that the great teacher should be a great clinician.

There is need of a revival of clinical observation,—careful, exact, comprehensive.

The great clinicians of forty years ago were handicapped by lack of definite knowledge of pathology and a meager knowledge of physiology, yet they were marvelous teachers, and a man today cannot do better than to read some of the old clinicians. In our study of modern pathology we have done well, but with what has been done there can well come greater clinicians than the old masters.

Such a school as I have portrayed, we

do not yet possess in Michigan, but no medical man in the State can fail to be interested in the proposed amalgamation of the University School and the Detroit College of Medicine.

The University School today ranks with the highest in all that pertains to laboratory training, in high standards well lived up to, but it is not the great school it may and should become and that on grounds of necessarily limited clinical opportunities.

Put the clinical possibilities of Detroit at her service and she will stand in the first rank as a great College.

I have spoken about the evolution of the great medical school as affording necessary instruction to the student. There is a greater side to this growth of a great school.

A great school will bring to the top the great teachers. There are many Professors who cannot teach; many a man may have knowledge, yet fail utterly in imparting it. The great school will furnish a field for the great teacher. From the ranks of many instructors will come up the men whose knowledge forms the basis for a fine enthusiasm, men who bring to their students an inspiration.

So long as the student had in mind his diploma only, so long the college curriculum was all sufficient,—so long the College Professor was omnipotent. Now, when the student has in mind the State examination he becomes greatly interested in results of teaching. The Professor is no longer to be worshipped—Can he teach? From this it is but a step to extra-mural teaching—a step sure to come in no long time. Not all the good teachers will be or can be upon a College staff. When a student is seeking results, extra-mural teachers may

rival men on the College staff, and it ought to be possible for the student to make choice.

Once let this be true and the great school will know where to find great teachers and will, of necessity, take them in. Not until a College Professor must win his spurs will we have the men we want and the men we need. And with extra-mural teachers the man who has won his spurs must still ride and contend.

Then a great school will be a center of fine enthusiasms, and around the school will develop ambitious men.

Have I presented to you a picture of ambition—of enthusiasm which does not touch you? All men cannot become College Professors, or gather within the walls of a Medical School. Is it therefore, far away from you? By no means.

Think of this: All these College teachers are concerned in a slow, laborious process of making young Doctors out of raw material. Fine young fellows, many of them, but raw material none the less. Some students ride through College on ponies from start to finish,—many are half way honest and only practice the fraud of ponies on occasions. How can a teacher feel enthusiasm in teaching such men? The honest,—the brightest and best of them are unfolding, but by no means ripe. Time and practice and perpetual study make fine Doctors out of many of them after they leave College.

It may be that you cannot teach Medical students, but you can teach Medical practitioners. You can do extra-mural teaching in your local medical societies, and you shall have gathered about you men trained in life's school—men who already know how to judge, students who have contempt for quiz compends, who demand the best you have in you and can

appreciate it when they get it.

Has a College Professor a spur to study—a growing ambition? The man who has the stirring of ambition within him can find in regular attendance at Medical Societies such a spur as a College Professor does not have.

Notice this, that your live College Professor is the Medical Society man—he wants an audience of men who know.

Medical education is a thing vastly greater than College and text book. We do not always stop and think. Take one of the leading Medical Journals; study its table of contents,—it is a most striking change. All the great problems of every branch of medical science and art are being taught. In five years a text book is antiquated, often useless. The real teaching is being done, not by text books, but by our fine medical journals. The man who keeps a lot of finely bound text books of varying ancient dates may impress the ignorant, but the man who intends to become a force in his community and among his fellows is the man who reads, marks, and inwardly digests good medical journals, and uses text books and monographs to help him systematize in his own mind what his journals tell him.

And these journals reproduce what is being first brought out in Medical Societies.

Has a man ambition to teach, let him teach in his Medical Societies. Has a man ambition to learn, let him attend his medical societies. It only takes five years for a text book to become antique. It takes less than five years to make a back number out of the medical man who neglects his Medical Society and his Medical Journals. In our Wayne County Society, an older doctor, long a stranger to our meetings, has lately been on hand

regularly. I asked him why? He said: "There have come into the Society lately a lot of fine young men, well trained. They have changed things. I cannot afford to stay away."

These young men mean much. In localities where it has been hard to organize County Societies, I have urged the men who have tried to start, or keep up a Society, "get the *young* men in—never mind the older men just now,—get the young men." We older men must keep up our society interests, must teach, must read, must study; all because of those young men. We cannot afford not to.

One more phase of medical education:

If we succeed in building up a great medical school, it must be on the basis of the free use of hospitals in clinical ways. The hospital is the training school. Now, medical men in many smaller towns have by no means developed the hospital idea as it can be done and should be done. The word "hospital" seems to suggest a large, expensive building. It need not be so. A dwelling house, with good sanitary conditions, can be made into a very servicable hospital at moderate expense, and many a County Society could do excellent work for its own members and for the community by establishing a hospital, not necessarily large, but adequate to the means of the community.

If it be true that, in a large city, physicians and surgeons find that they can secure so much better results by putting many of their patients in hospitals, it is equally true that people in the smaller cities and towns need just as good care as people in a large city.

I have spoken about extra-mural teaching as being something open to every ambitious and progressive man. The es-

tablishment of numerous small hospitals is only another step in the same direction. I am well aware of the objections that will at once spring up of professional jealousies, of expenses, and of the labor of administering a hospital; yet I believe there is going on such an evolution in the medical life that the County Societies, if they take hold of this matter, can exert an influence upon the community so as to secure the necessary financial means to carry on such work. The result would, I think, prove of great benefit both to the community and to the physicians.

A good hospital in a small town would stimulate every physician within its influence to more accurate diagnosis, and to more up to date practice. I believe that it would contribute greatly to good fellowship.

Such a small hospital conducted, not by a clique, but by a County Society, would do away with many petty jealousies;—would be common ground where men could meet, compare experiences, consult; many laboratory aids to diagnosis which cannot be had in small places would be at the service of all.

At present the charity patient is a burden which the physician carries alone. It is time that the community carried part of the burden—In supporting a small hospital it would do so.

So far, I have spoken of medical education purely. I cannot forebear urging upon your attention a phase of education which must be carried out by medical men, if at all. I refer to the education of the public in regard to the prophylaxis of the venereal diseases. You will receive a report of the standing committee on this subject, as you have done for two years past. The work of the committee cannot be too highly commended.



My plea is that the members of this Society individually, and that the County Societies carry out the suggestions made by the committee, and begin the much needed work of educating the public.

Under the auspices of the Committee a public meeting was held in Detroit, which was attended by principals of schools, lawyers, ministers, newspaper men and others. There could be no question of the interest awakened by the meeting, and the expression of surprise and astonishment on the part of some of the leading men in the community at the facts brought out by the committee, was remarkable evidence of the need of public education. These were men looked upon as leaders in thought of the community, considered as thoroughly intelligent men, who learned of the facts with amazement.

If these revelations so surprise men of this class, how great is the need for a universal education on these lines! What was done in Detroit on this occasion ought to be done within a year from now in every County in the State, in every town, and it ought to be done much oftener than once a year. I realize that it requires courage, force, persistence, to inaugurate and carry on this movement; but the curse of venereal diseases is so great, the ravages are so disastrous, that men who know have no valid excuse for keeping silence.

We pride ourselves on the results of the re-organization of the medical profession. If these results are counted simply in an increased membership and attendance at County, District and State Society meetings, then the re-organization will fall far short of its actual possibilities.

When we figure up results we ought to figure up the results in terms of suc-

cess in bettering human conditions.

Medical men must do the work which medical men alone can do. It is not our province to carry on the reforms in social life, which can as well be done by all citizens alike, but there are many things which, if done at all, must be done by the medical men. The influence of school life and school requirements upon the health of pupils, the improvement of sanitary conditions of schools, prisons, factories; the problems of health which are bound up in the labor of children and women in factories; the influence of defective mental training, in the increase of insanity;—all these are problems which depend upon medical men for their solution.

The field of activity for the County Societies is opening up in large ways, and it will be a proud day for the profession when County and District Societies report to the State Society, not only increase of membership and attendance, a growth of fraternal feeling, but practical results in solving such problems as I have here suggested.

In connection with this subject of higher standards for medical education, the American Medical Association has formed a council on medical education. I venture to suggest that this Society appoint a Standing Committee on medical education to co-operate with the council of the American Medical Association.

Members of the State Medical Society:

When a man sums up the things which make life truly worth while, he should first count up the number of his friends, and who they be.

If those friends are men and women,

who have knowledge, so that they can judge him well, then he is fortunate indeed.

So I count myself happy, in your good will, and am most grateful for the honor

you did me, in electing me to this high office.

May I not hope that, as I shall continue grateful all my years, so I may still be richer, by your friendship continuing.

## THE POPULAR SYNTHETIC REMEDIES, THEIR USE AND MISUSE\*

J. O. SCHLOTTERBECK, PH. D.,

(Dean of the School of Pharmacy, University of Michigan.)

With the increasing employment by the medical profession of proprietary preparations of various classes, there appears to be a corresponding laxity in the use of the word "synthetic." It is not uncommon to hear the word used indiscriminately in connection with true synthetics, fictitious synthetics, decomposition products, and even mixtures pure and simple. This is not surprising when we consider that some knowledge of the chemistry of a compound is essential to a proper classification, and further that the terminology of the majority of the army of new remedies is anything but suggestive of composition. In fact, it may be said that many of the titles appended to new remedies have for their chief recommendation brevity and euphony, in addition to an utter lack of significance. Again, owing to the relatively slight attention given to the subject of organic chemistry in medical colleges in the past as well as at present, many physicians are not in a position to distinguish between classes of chemical remedies, even when a scientific or semi-scientific nomenclature is employed. A

very prominent physician recently expressed his belief that the status and efficiency of the medical profession would be largely enhanced if some of the spectacular courses of present day medical curricula were replaced by more thorough training in the chemistry, pharmacology and prescription of definite chemical compounds. It is needless to say, is scarcely open to argument in fact, that in this age of synthetic remedies the physician should have at his command a discriminating knowledge of organic chemistry.

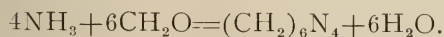
But what is a synthetic compound? Let us compare the preparation of a synthetic with the construction of a building, a rather homely illustration, but one which will answer the purpose. Edifices of widely differing architecture are constructed by bringing together not in a heterogeneous mixture, but according to definite plans, a number of structural units more or less different in character. When the buildings are finally completed we have new structures entirely unlike the units of which they were built. They are comparable with the synthetic compounds prepared in the laboratory. Now, if an edifice be demolished and resolved into the original structural units or ele-

\*Read before the Wayne County Medical Society, April 16, 1906.

ments of which it was composed, these units could be compared with the decomposition products obtained when a compound is subjected to analysis. Synthetics are made by the established chemical process called synthesis, which is the uniting of simple compounds or elements\* to produce complex ones. Synthesis is therefore a constructive process, the opposite of analysis, which is a destructive or demolishing process.

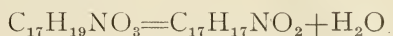
A scientific illustration of the principles of synthesis and analysis is well exemplified in the investigation of the composition of water, one of the first experiments which the beginner in chemistry performs. By electrolysis water is decomposed into its elements, hydrogen and oxygen, in the proportion of 2 volumes of the former to 1 volume of the latter. This you will recognize as the analysis of water. Now, by exploding this same mixture of hydrogen and oxygen with the spark from an induction coil, the elements unite chemically with the formation of water. This is clearly the synthesis of water.

In the domain of organic chemistry the construction of the pharmacopoeial synthetic "hexamethylenamina," better known by the names urotropin and cystogen, is a little more complex but readily understood. When a mixture of stronger water of ammonia and solution of formaldehyde in certain proportions is allowed to stand for about twelve hours, a condensation takes place and the famous urinary antiseptic is formed. The reaction takes place according to the following equation:



This is one of the simplest illustrations of synthesis.

Apomorphine is a well-known article of the pharmacopoeia, which is often incorrectly classed as a synthetic. When the alkaloid morphine is heated in a sealed tube with strong hydrochloric acid, it is broken up into two new compounds, the base apomorphine and water, as follows:



The identity of the original alkaloid is destroyed and the components are both less complex than the morphine. The apomorphine was obtained by a destructive or analytic process, therefore it can not be called a synthetic product, but rather a decomposition product, or a derivative of morphine, if you wish.

While the chemist uses the word synthesis and therefore synthetic for all compounds, whether organic or inorganic, made by the constructive process, the physician and pharmacist commonly connect the word with organic compounds used in medicine.

There is a firmly established impression among a large class of pharmacists and physicians that all synthetics are coal tar products. This is far from the truth. A little later I will show that there is a very large proportion not derived from any of the products contained in coal tar. When bituminous or soft coal is subjected to destructive distillation, that is, heated in retorts without access of air, the compounds originally existing in the coal are split up into simpler ones, some of which are gaseous, some liquid and some solid. The coal gas, when it leaves the retort is passed through water, which absorbs the ammonia, the resulting gas water being our principal source of ammonia. The coal tar was formerly considered a nuisance and could be obtained for the manufacture of sidewalks



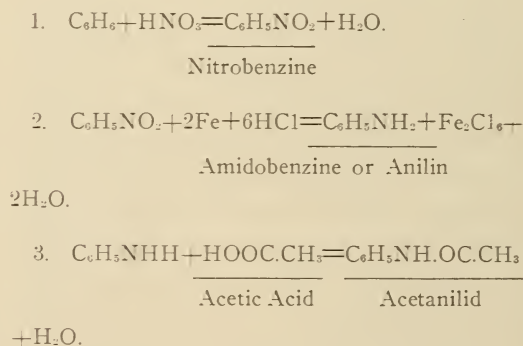
and pavements at a very low figure. It is still used to a slight extent in my home city for that purpose, but I doubt very much that the average citizen of Detroit gets an opportunity to see and smell coal tar. It is now one of the most valuable by-products in the manufacture of coal gas and commands a ready market, because of the valuable constituents it contains.

When coal tar is subjected to fractional distillation, that portion of the distillate which floats on water is called light oil. That which has approximately the sp. gr. of water, and therefore swims in water, is called dead oil, and that which sinks in water is called heavy oil. A further fraction obtained at temperatures as high as 400 degrees C. constitutes anthracene oil from which the parent substance of many coal tar dyes is obtained. The residue in the retort is pitch, used in making varnishes, etc. This classification of the fractions is not uniform with all producers, some collecting more fractions and others less. Over 80 different chemical compounds have been isolated and identified in the fractions obtained in the distillation of coal tar, but there are only a few of these of great commercial importance because of the cost of separation. The most important products are benzene or benzole from the light oil; naphthalene or tar camphor from the dead oil; phenol or carbolic acid from the heavy oil, and anthracene from the anthracene oil.

It may be of interest to show by materials and formulae how one of the most popular classes of synthetic antipyretics is developed. When benzene (not benzin obtained from petroleum) is treated with strong nitric acid under certain conditions, the nitric acid radicle  $\text{NO}_2$  enters the benzene nucleus or ring and water is split off. The resulting compound is a yellow liquid of

bitter almond odor and of altogether different composition from the true oil of bitter almond. This oil is commonly called oil of mirbane and is used to perfume cheap soaps, floor oils, polishing pastes and so on. When this nitro-benzene is reduced by means of Fe and HCl, whereby nascent hydrogen is generated, amido benzene or phenylamine is formed. The common name for this compound is anilin or anilin oil. It is poisonous and was once administered in the form of the sulphate and hydrochloride as an antipyretic. It was this property of anilin that suggested the introduction of acetanilid. Now by boiling anilin oil with glacial acetic acid,  $\text{H}_2\text{O}$  is split off and the acetyl group or acetic acid radicle replaces the hydrogen of the amido group with the formation of acetanilid. This is easily purified by recrystallization.

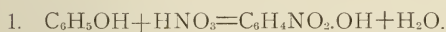
This series of reactions will show how easily and cheaply this synthetic is made:



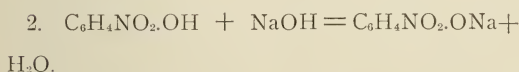
By substituting other acids for acetic acid a great variety of derivatives can be made with physiological actions on the whole the same as acetanilid. If salicylic acid be used in place of acetic acid we obtain salicylanilid; benzoic acid will make benzanilid; gallic acid gallanilid; formic acid formanilid and so on. If bromine be substituted for one H in the para CH group we obtain the synthetic aepsin; with iodine iodacetanilid; if the  $\text{CH}_3$  group be substituted for H in the NH group, exalgine is obtained.

The manufacture of phenacetin is a little more expensive but not very much more difficult than the manufacture of acetanilid. Starting with phenol or carbolic acid and treating with  $\text{HNO}_3$  we obtain para-nitro phenol. The sodium salt can be easily made by adding to it NaOH and by heating this with  $\text{C}_2\text{H}_5\text{I}$  para-nitro phenetol is obtained. By reduction again with Fe and HCl as in the manufacture of acetanilid the  $\text{NO}_2$  group

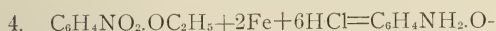
is reduced to the  $\text{NH}_2$  group and we have parphenetidin. Boiling this with glacial acetic acid, the substitution takes place in exactly the same manner as in the formation of acetanilid. It may be regarded as acetanilid in which the  $\text{OC}_2\text{H}_5$  group replaces one H atom. It would be known then also as ethoxyacetanilid or as acetphenetidin. By developing these two antipyretics, although it may seem somewhat complex, one is able to appreciate the relationship existing between them and explain that the superiority of phenacetin is due to the entrance in the acetanilid molecule of the ethoxy group.



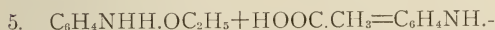
Para nitro phenol



Para-nitro phenetol



Para-phenetidin



Acetic acid

Phena-



cetin.

Here, too, there are a large number of derivatives possible by introducing other acid radicles than acetic. Lactic acid gives lactophenin; salicylic acid produces saliphen; citric acid citrophen; propionic acid triphenin; mandelic acid amygdophenin. The physiological action of all of these compounds and a number of other derivatives of phenetidin are fundamentally the same.

The antipyretics just spoken of are coal tar derivatives or synthetics, but of a list of over 30 synthetics which I found on the shelves of an Ann Arbor pharmacist more than half were not derived from coal tar products. In this list the fol-

lowing were from coal tar: antipyrin, acetanilid, phenacetin, exalgine, lactophenin, nosophen, orthoform, salophen, agurin, xeroform, saccharin, salol, methylene blue, phenolphthalein. Those derived from other sources were iodoform, chloral hydrate, chloralamid, heroin, protargol, argyrol, sulphonal, trional, urotropin, beta-eucain, euquinin, tannigen, tannalbin, aristol, duotal, thiosinamin, veronal, urethan.

Among the newer remedies which have received the recognition of the medical profession is a class which may be strictly called fictitious synthetics. I refer to simple mixtures, some of which are more or less of the shotgun type, which have been dressed in the garb of the synthetic and exploited under pseudo-scientific names as definite chemical individuals endowed with original and extraordinary qualities. The promoters of these frauds chuckle as they hoodwink the professional man with their skillfully worded literature while apparently flattering their scientific acumen. The sad phase of the situation is that after one has been deceived so long he will continue to use personally and prescribe for others such fictitious synthetics, even though he be enlightened upon their true status by competent chemists and pharmacists. You will pardon me for referring to the analyses which perhaps all of you have seen published in the Journal of the American Medical Association of such fictitious synthetics as antikamnia, phenalgin, salacatin, ammonol, etc. In each case it was found that the easily and cheaply made acetanilid was the principal component of the mixture, and merely modified by the addition of some stimulant as caffeine or ammonium carbonate or some salt to aid in the solubility of the

acetanilid as sodium bicarbonate and sodium salicylate.

There are other mixtures that are exploited as synthetics by some of our manufacturers who have heretofore been considered reputable. I have in mind now an external preparation advertised as a definite synthetic compound of a half dozen or more antiseptics and germicides and claimed to liberate at least four powerful antiseptics in a nascent state, when brought in contact with serous fluids. The claims are preposterous and fraudulent on their very face for such a combination of "shot in one load" is an absolute impossibility and contrary to all principles of chemistry.

The committee of revision was authorized by the Pharmacopoeial Convention held in Washington in 1900, "to admit any synthetic product of definite composition which is in common use by the medical profession, the identity, purity and strength of which can be determined. No compound or mixture to be introduced if the composition or mode of manufacture be kept secret, or if it be controlled by unlimited proprietary rights." Acting under these instructions a large number of synthetics were introduced into the pharmacopoeia and doubtless a much larger number would have received recognition by the committee were it not for the limitations placed upon them by the convention. It would be uncharitable to pass judgment upon the admission or omission of any article without first ascertaining its actual status, as we believe was carefully determined by the members of the committee. Those that have been admitted represent, I believe, the ones that are most commonly used by the physician at the present time. Indicating them by their pharmacopoeial and trade

names they are *acetphenetidinum* or phenacetin, *aethylis carbamas* or urethane, *antipyrina* or antipyrine, *benzosulphinidum* or saccharine, *bismuthi subgallas* or dermatol, *chloralformamidum* or chloralamide, *guaiacolis carbonas* or duotal, *hexamethylenamina* or urotropine, cystogen, formin, etc.; *iodolum* or iodol, *methlythioninae hydrochloridum* or methylene blue, *sulphonethylmethanum* or trional, *sulphonmethanum* or sulphonal, *thymolis iodidum* or aristol. Those that have been continued from the last edition are acetanilid, methyl salicylate, resorcin, salol and terpin hydrate. While there are a few others that are just now being used to a large extent, I think it will be admitted that the above list practically embodies those that the physician is fully informed upon, at least as to the limitations of physiological action and therapeutic application.

According to the plan adopted by the Pharmacopoeial Convention it was recommended that titles be chosen for newly admitted remedies that are in harmony with usage and convenience in prescribing, but in the case of definite chemicals a scientific name to be given as a synonym. This instruction was rather elastic, left much to the judgment of the committee and partially explains the apparent inconsistencies in the terminology of the synthetics introduced.

Much alarm and dissatisfaction upon the terminology of the synthetics in the U. S. P. have been expressed by the medical profession who seem to be completely overwhelmed by the scientific nomenclature of about one dozen new remedies. It is claimed that the names although scientific are meaningless, and that the majority of physicians will not use them. I have learned that there are physicians who have attempted to cultivate



the habit of writing only pharmacopoeial names in prescriptions and have found that some pharmacists were unable to decipher them. The alert, educated pharmacist ought by all means to inform his physicians by means of letters or booklets of the changes made in the new pharmacopoeia and assure him that at all times he is prepared to meet all demands for official articles. More medical men, if assured of this attention, would use the terminology adopted in the pharmacopoeia.

Now what, if any, are the advantages of this scientific terminology? Men of science need not be told that without a scientific nomenclature it would not be possible to bring order and system out of chaos, no matter what the particular pursuit. We have but to compare the arbitrary system of Linneus in botany with the present day almost perfect classification of Engler and Prantl. Without systematic classification, the study of relationship is not possible and without the latter there can be no science. Let us suppose that potassium bromide were known by the fanciful, senseless name "Kazak," and sodium bromide by "Onit" and ammonium bromide by "Sevol." Imagine the physician attempting to determine whether his patient required the peculiar stimulating effect of the ammonia in "Sevol," or the depressing effect of the potassium in "Kazak," or the non-specific effect of sodium in "Onit." Would he not hold up his hands in dismay at this formidable nomenclature? Does not the knowledge of the chemical relationships of the medicinal salts which every physician possesses make it possible for him to follow diagnosis with rational, intelligent therapeutics? One of the greatest objections that can be offered to the

usual nomenclature of new remedies is the fact that instead of being descriptive, suggestive and scientific, they are mostly senseless and therefore do not permit of classification by the educated physician. A systematic classification of the synthetics is possible, in fact has been partially devised, and cannot fail of assisting the physician in a keen differentiation of related bodies.

Suppose some genius conceived the plan of placing on the market common cane sugar under the name of "sugarine" and advertised it in most glowing terms as the most wonderful sweetener the world ever knew at a price of \$1.10 a pound. Another quickly recognizing the credulity of the public exploits cane sugar as "sweetol," and makes additional arguments why it should be used in preference to others and sold it at 75 cents per pound. Another places "ducitol" at 50 cents per pound and finally an honest dealer offers the same article at 5 cents per pound as "saccharum" or sugar. What would you think of the cook that would use several of these brands of sugar in making your pastry? An exactly similar condition exists in medicine today. The pharmacopoeial synthetic hexamethylenamina is upon the market today under the names urotropin, cystogen, aminoformin, formin, uritone, urisol, cystamin and so on, at prices ranging from 10 cents to \$1.10 per ounce. It is not uncommon for physicians to prescribe one or more of these fancy-named but identical synthetics in the same mixture, expecting to get the combined action of different urinary antiseptics. It is also true that patients have been treated first with hexamethylenamina under one name and then with the same article under another name in

the expectation that fooked-for results will finally manifest themselves.

By prescribing hexamethylenamina, the physician receives an article that is uniform and one whose purity and quality can be controlled by the tests of the Pharmacopoeia. Besides that, he is then not a party to the fostering of a graft, which is possible by prescribing the same article under a fancy registered name and sold at a price ten-fold greater than the pharmacopoeial article. Surely no physician wishes to inflict an unnecessary hardship upon himself, or pharmacist or patient.

There is another reason why the physician should make an heroic endeavor to write the scientific nomenclature instead of the short, easily read names and that is to curb the pernicious practice of self-drugging and prescribing by the public, who are generally incompetent to decide what is best for their particular ailment. Cannot some of the dangerous drug habits be traced directly back to a prescription of some easily read synthetic? How often does the physician learn that after prescribing salol, phenacetin, heroin, cystogen and a host of others, his patient has read his prescription, called for the material from the pharmacist, used it ever afterwards and recommended it to his friends with the added assurance that it was indorsed by Doctor So-and-so? Is it not in this way that many of the nostrums were introduced and then finally advertised directly to the laity?

I am firmly convinced that if this matter be considered in a true scientific spirit that in a short time there will be no more difficulty and inconvenience in writing the scientific nomenclatures than writing Sodii bicarbonatis in place of baking soda, Cupri sulphatis for blue stone, Ferri

sulphatis for copperas, and so on *ad infinitum*. I recollect well how some worked themselves almost into a frenzy when antifebrin was introduced into the previous pharmacopoeia as acetanilid, and I dare say less than 1 per cent of the prescriptions for this substance are today written antifebrin. There is so much to be said in favor of the scientific terminology and so little against, by all means let us cultivate the scientific habit in nomenclature.

While not exactly germane to the subject, I wish to say a few words upon the exploitation of synthetic remedies. For fear you might assume that I am opposed to the use of synthetics, I wish to disabuse your mind of that. I favor most emphatically the conservative use of these definite substances and believe some of the remedies now in use that have passed through a rigid probation period, will continue indefinitely to enjoy the exalted position in the materia medica. What I would caution against is the tendency of certain classes rushing blindly to the support of anything synthetic, especially if made in Germany and bearing testimonials of German clinicians, many of whom are unknown outside of their own communities. The Privat Docent of the German universities who receives but a mere pittance in salary and is never promoted until his superior dies or moves away, is glad of the opportunity to add to his meager income by testing new remedies and giving testimonials. It is but natural, under the circumstances, that if he discover some desirable physiological action along with others that may be undesirable or even dangerous that he will magnify and exaggerate the former and pass over the latter lightly or entirely. There is no

question that hundreds of chemicals reaching our shores are used for a short time only by those who are always looking for something new, only to be relegated to the shelf of forgotten ones. This practice is very suggestive of the wild speculation in mining stocks, some of which are wild cats of the worst type, others low class speculations and a very few really meritorious. Only last week I was told by a pharmacist that a prominent physician in my home town had in one week written three or four prescriptions for agurin, which, it seemed, no pharmacist in the city had in stock. The proprietor, believing that the physician would continue to use the article immediately added it to his supply. That was over two months ago, and since that time not a single call had been received for the synthetic. It is this transient use of synthetics, without taking any care to determine which are really meritorious, that should be curbed. I believe that it was in 1900 that the famous pharmacologist Professor Kobert suggested to the German Society of Naturalists and Physicians the urgent need of a committee on new remedies, to give unbiased and authoritative reports upon the multitude of compounds seeking the favor of the physician. He deplored in most emphatic terms the manner in which physicians publish accounts of their insufficient clinical experiences at the request or suggestion of manufacturers. It is this carelessness he emphasized that has brought the practice into disrepute and has reflected unfavorably upon the profession as a whole. The instability, the rapidly changing nature of the newer *materia medica* was brought to me more forcibly than ever when Dr. A. R. Cushny, formerly of the University of Michigan, but

now of the University of London, asked me one day to name ten synthetics that had stood the test of ten years' intelligent practice. I began to enumerate them, but could not name the ten, and neither could he.

But, you may ask, what is the physician going to do? How is he to determine which is wheat and which is chaff? Be he ever so willing to inform himself upon the nature of these remedies, I confess, the only source, outside of the dispensaries which, I regret to say, are showing decided ear marks of injected commercialism, is the literature of the promoter, which is apt to be partial, inaccurate, extravagant or even deceptive. I am free to confess that there is little solace for the physician in the pharmacopoeia for the very information he needs most is not contained within its pages. Not even the synonyms of the synthetics introduced are to be found anywhere in the book, as if the intention were to place as many obstacles as possible to its use by the medical profession. I believe, however, that this scientific treatise would be made to meet more nearly the wants of the physician if a united demand were made by the whole medical fraternity. What he needs, as one of the members of the revision committee said, "is some disinterested source for the information on the enormous number of new remedies—meritorious and worthless, safe and dangerous, honest and fraudulent—which are constantly forced upon him and upon which it is next to impossible to ascertain authentic knowledge."

This disinterested source of information would needs be published at intervals and revised to keep pace with progress. For the desired information upon the synthetics of the pharmacopoeia, I



would recommend a careful perusal of Bulletin 23, issued from the Hygienic Laboratory of the Public Health and Marine Hospital Service of the United States Army, entitled "Changes in the Pharmacopoeia of the United States of America. Eighth Decennial Revision." In this pamphlet of over 100 pages so much information is given upon the synthetics introduced that if carefully read it must bring about a greater familiarity with changes that seem almost epoch-making. Besides this there is a crying need for an authoritative source of information on all preparations which the physician may wish to prescribe.

You have doubtless all heard of the organization and the plans of the Council on Pharmacy and Chemistry of the American Medical Association. It is composed of fifteen members, teachers in medical and pharmaceutical schools, chemists, pharmacologists and therapeutists. It is the function of this council to sit in judgment upon the various medical preparations that are offered to the physician and which are not included in the United States Pharmacopoeia. These preparations will include, in addition to synthetics, so-called proprietaries and specialties with trade marked names. Those preparations which conform to the standard established, embodied in the rules of the council, will be admitted to a book issued by the A. M. A. and designated "New and Non-Official Remedies." Briefly, the rules are as follows:

No article will be admitted unless its active medicinal ingredients and the amounts of each in a given quantity of the article be furnished.

No chemical compound will be admitted unless information be furnished regarding tests for identity, purity and strength and, if a synthetic, the rational formula.

No medicinal article that is advertised to the public will be admitted.

No article will be admitted whose label, package or circular accompanying the package contains the names of diseases in the treatment of which the article is indicated.

No article will be admitted of which the manufacturer or his agents make false or misleading statements concerning geographical source, raw material from which made, method of collection or preparation, or about whose therapeutic value unwarranted, exaggerated or misleading statements are made.

Labels on articles containing heroic or poisonous substances must show the amounts of such ingredients in a given quantity of the product.

Admission to the book does not mean indorsement, but merely that the preparation conforms to the rules; that is, is ethical and not wrapped in a cloak of secrecy and fraud. The task of the council is tremendous and the number of preparations to be passed upon almost overwhelming. Some are getting impatient with the council because it is not working faster and giving tangible evidence of its existence and activity. It must be remembered that this work is very similar to that of the revision committee of the U. S. P.; in fact, is taking up the work where they left off, so to speak, and they were five years in materializing the revised edition.

The reputable manufacturers both at home and abroad have expressed themselves in no uncertain manner in favor of this movement, for they have nothing to fear. It is the commercial promoter whose principal ambition and pride seems to be the accumulation of wealth at the expense of a sluggish public, and who fears that the tribute he collects will be curtailed, should the truth be told, who is opposing this movement and hurling bitter invectives and artful innuendoes at the council. The physicians are a unit, I believe, in support of this work and for that reason no appeal for your encouragement is necessary. The motive which prompts this campaign is certainly not a mercenary one, but merely a patriotic desire for honesty in pharmacy and medicine.

## THE THERAPEUTICS OF THE SYNTHETICS IN GENERAL USE.

F. LYDSTON NEWMAN, M. D.,

Detroit.

Anything like an attempt at a comprehensive review of the synthetics that are now generally used would be manifestly absurd in a fifteen minutes' paper. The ever increasing number of new remedies of this class, their complexity and the scattered condition of the literature make the task bewildering.

Great numbers of such products that were heralded five or six years ago with voluminous literature, containing reports that seemed very convincing and wonderful, are forgotten today.

But out of this multitude, from time to time, one product and then another begins to shine with a clearer light, isolates itself from the others, and begins to take a definite place among the drugs in daily use, eventually finding its way into the pharmacopœia.

We wonder when we realize that all this array is built up by simply differing the chemical arrangement of not more than six elements, and that they are capable of further combinations as innumerable as the countless musical harmonies that can be produced by changing the arrangement of seven notes. Arranged in one order we have a dirge, in another we have a dance. Similarly, one arrangement of certain atoms gives us an hypnotic, while the same atoms in different chemical grouping gives us a cathartic. The chemists show us that such well known articles of food as starch and sugar contain exactly the same elements as

strychnine only in different grouping.

For the sake of getting a starting point, I shall take up the synthetics in general use, according to their class and therapeutic manifestations, and shall attempt to sum up briefly their indications and incidentally to recall some of the errors we make in using them.

It seems reasonable to begin with the best known of all the classes, the analgesics. This class contains such well known remedies as acetanilid, phenacetin and antipyrin. These are also the most used antipyretics in the synthetic group. Lauded to the skies on the one hand and utterly condemned on the other, even by such an authority as Jacobi, they have proven themselves anything but an un-mixed blessing.

Exactly what the action of these drugs is on the protoplasmic chemical activity has not been definitely determined, and also as far as their antipyretic action is concerned, while much has been written as to the part played by radiation and evaporation, it seems to be conceded that their action is mainly due to their lessening oxidation, thus actually lessening the production of heat.

Undoubtedly they are much less used as antipyretics than they were a few years ago. Their interference with metabolism and the subsequent depression which they produce make physicians afraid of them in all long-continued diseases. Nevertheless, where it is deemed advisable to use them as antipyretics they are certain and efficient, reducing the temperature in

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the case of antipyrin in less than an hour; more slowly, but with less depression in the case of phenacetin. The fall of temperature, however, is independent of the diaphoresis which occurs at the same time; the latter can be prevented, when desired, by the use of atropin, without changing the efficiency of the antipyretic action.

The second great indication of these coal tar derivatives is their power of relieving pain. It appears to have been demonstrated that they are unreliable for inflammatory pains. But in the pains of influenza, and of migraine, in the neuralgias in which the pain is the outcome of nerve storm and in ordinary rheumatic pains, their action is little short of marvelous. It is this wonderful power that has caused their promiscuous use by the laity in the form of the thousands of headache cures. So great is the demand for these preparations that nearly every druggist exploits a sure cure for headache, stamped with his name, and usually containing acetanilide in whatever dose he sees fit to exhibit. Little boxes of headache tablets are about as prevalent as the old-fashioned snuff boxes used to be. If proof is to be desired, one has only to complain of a headache, at a dinner, or anywhere where a few are gathered together, when the most skeptical will be immediately convinced.

I have heard it asked in this society, by well known physicians: What harm do these preparations do? What if they do sometimes produce cyanosis and collapse? How many have ever seen a death from these drugs? It is very probable that none of us have. Still we know that their continued indiscriminate use interferes with metabolism, disturbs thermogenesis so that a condition of absolute intolerance to

cold is produced, with feeble heart action; with not only a decrease in the number of red blood corpuscles and the percentage of haemoglobin, but also marked increase in the number of white blood cells.

An inquiry two years ago into the cause of the large increase in the number of sudden deaths in New York city seemed to prove the indiscriminate taking of the coal tar products by the laity as directly responsible.

Passing to the hypnotics, the most generally used comprise, heroin, sulphonal, trional, veronal and chlorotone. Heroin, though a poor hypnotic, stands in a place by itself. Although a morphine derivative, it differs from the latter drug in its action on the respiratory apparatus, producing increase in the volume of inspiration and the force of the expiration, together with a general sedative action upon the broncho-pulmonary tract. Probably no drug can compare with heroin as a preventative for the distressing stagnation of secretory products in the lungs, particularly in cases of pulmonary tuberculosis, and in the cough and dyspnea in organic disease of the heart.

Sulphonal is a very valuable hypnotic, much slower, though hardly as certain as trional. It was first exploited as particularly useful in the insomnia of cardiac disease. Here, however, it has proved inferior to chloral. It will be found that sulphonal is of most value in those cases in which the individual wakes up after a few hours sleep and is unable to sleep again, while trional is of most value in those cases in which the patient cannot sleep from the first.

Veronal is one of the newer hypnotics. It is safe and is especially valuable in the treatment of insomnia with motor excitement.



Chlorotone has proven less certain than any of the others, but appears to be the most efficacious in the persistent insomnia of the aged.

Among the synthetic antiseptics and disinfectants, we have quite a long list in popular demand. Were it not for its abominable odor iodoform would still rank among the best. It is not in any sense of the word an antiseptic, not being in itself even sterile. It is capable of infecting a previously aseptic wound. It is poisonous but popular. Its virtue, as a disinfectant, depends upon the amount of iodine which it liberates in the presence of moisture. And this is also true of the odorless substitutes, aristol, eucophen and iodol, all of which are very commonly used. They all, unfortunately, have the faculty of forming crusts which interfere with drainage and thus defeat one of the first principles of good surgery.

It appears that the value of iodoform is in direct proportion to the foulness of the wound. I believe that the local anesthetic properties of iodoform are not sufficiently appreciated, particularly its power of numbing the rectum. I have seen, time and again, patients sleepless and in misery from the pain of prostatitis sleep calmly the whole night through after the exhibition of a suppository containing 2 or 3 grams of iodoform.

Salol and salophen are drugs having the same therapeutic indications. Great things were expected from salol in the treatment of rheumatism. At the present time it is used almost exclusively as an intestinal and urinary disinfectant. Carbolic acid and salicylic acid, being liberated by its decomposition, Wood considers it the most efficient of our intestinal antiseptics.

Duotal and benzosol, which are respec-

tively the carbonate and benzoate of guaiacol, have a wide field of usefulness. Both are used as substitutes for guaiacol, but are less irritating and have less unpleasant taste. Some quite remarkable results have been reported in the treatment of pulmonary tuberculosis by benzosol, gr. V. t. i. d. for a year, while as an intestinal antiseptic benzosol can be given in gr. xx. i. doses to adults, while children take gr. v. with excellent results.

In this connection, we must also mention such silver preparations as argyrol, containing 30% silver, and protargol, containing 8% silver, both having distinct advantages over nitrate of silver, inasmuch as they are not precipitated on contact with albumin, the alkalies or dilute hydrochloric acid. Argyrol is probably the most popular of all the recent silver preparations in the treatment of gonorrhea; used in solutions of one to ten per cent., and held in the urethra from 5 to 15 minutes, it absolutely destroys any gonococci with which it comes in contact, and its action extends to the deeper layers of the mucous membrane. After the destruction of the gonococci, the remaining discharge can be arrested by astringent injections. It is probably the most positively preventative of gonorrhea known. Two drams of a 10% solution held in the urethra five minutes, is the method of procedure. In the treatment of ophthalmia neonatorum I have used 25% argyrol solution dropped into the eyes, t. i. d., with remarkably good results, and with none of the pain coincident with silver nitrate.

Methylene blue is another drug in this class much used in the treatment of gonorrhea. In this connection, it seems probable that it has been very much overrated and at best may be set down as a mild

genito-urinary antiseptic. Its greatest therapeutic value is in its use as a succedaneum for quinin. In this respect it is unrivaled and may be given whenever the latter is indicated, or whenever in malarial fever quinin is contraindicated.

The local anesthetics. Here we have prominently beta-eucain, which has superseded alpha-eucain, and orthoform. Eucain is somewhat less powerful than cocain, but is much less toxic. In ophthalmic practice it is used in 2% solutions and has an advantage over cocain in that it does not dilate the pupil, but it smarts more than cocain. It possesses other advantages in forming a permanent solution with water in 3½% strength, and such solutions can be boiled without such sterilization causing decomposition of drug. In 1900, Barker, in the *Lancet*, reported a long series of major operations under eucain anesthesia.

With orthoform, my own experience has chiefly been in the treatment of painful affections of the throat. In ulcerative sore throat and tuberculous laryngitis, great relief from the pain and swelling can be obtained, using gr. ¼ to gr. ½ in the form of a lozenge, as suggested by Solis-Cohen; it comes in direct contact with the exposed sensory nerve filaments. When used before a meal, it affords, in a few minutes, marked relief and the effect is quite prolonged. Orthoform is comparatively harmless, and with regard to the disagreeable after effects sometimes reported, it would appear that there is an occasional intolerance. It is probable, however, that the fault is more often with the physician who leaves its administration to the patient, who, in his efforts to continue the relief, uses it too freely.

I should like, were it not that the paper is getting too long already, to write on

the alterative, ichthyol, the antirheumatic, aspirin, with its great advantages, physiologically and therapeutically over the older salicylates, and the diuretics, theobromin, diuretin and urotropin.

Probably few, if any, new remedies have been so thoroughly tested and so favorably commented upon as urotropin. It effects a genito-urinary asepsis which has been hitherto impossible to attain. It fails to act only in gonorrhea and tuberculous bladder affections. It is of remarkable value in pyelitis, cystitis and ammoniacal phosphaturia. I think that the most common error we fall into in the exhibition of urotropin is the failure to remember that in order to have urotropin decomposed it is necessary to have an acid urine, and that though this drug tends to produce urinary acidity, it is often necessary to administer benzoic or boric acid in conjunction with it to maintain the acidity.

Urotropin is used as routine practice by many physicians in the treatment of typhoid fever to keep the urine free from the typhoid bacillus, and to prevent such sequelae as cystitis and orchitis; also to lessen the danger to the community after recovery, it having been demonstrated that the bacillus can often be detected in the urine long after convalescence.

Reports apparently show that its routine use in scarlet fever diminish the liability to nephritis.

I wish here to take exception to the dose recommended in many recent text books, i. e., 15 to 20 grains. I believe such dosing excessive and liable to produce hematuria.

Cathartics. I know of but one synthetic purge, phenolphthallein. This preparation has been quite extensively used in Austria-Germany and England, where it

has been exploited as a harmless gentle aperient, for children and adults. It has been adversely criticised by Schwars, who advises caution with children, as phenolphthallein is a phenol derivative. Vamssey, however, points out that it does not give off phenol within the system. It is sold in Europe under the designation "purgin," and under this name it has recently been introduced to the profession in this country. My own experience with it has been limited. Administered to children in from gr.  $\frac{3}{4}$  to gr.  $1\frac{1}{2}$  at night, it produced one or more rather liquid evacuations in the morning, with no pain. The tablets in which it is put up have a decidedly pleasant taste, so that it is easy to administer to children. I have administered it to adults in 10 gr. doses (15 gr. is considered a large dose) at night, producing several free watery evacuations in the morning. Often gr. 3 were sufficient to produce this result. According to some high authorities, its properties can be summed up as follows:

It acts as an aperient in chlorosis and in jaundice.

It does not irritate the kidneys.

It lowers arterial tension less than magnesium sulphate.

It can be administered for a long period when other remedies cause vomiting.

It is valuable in cases where it is not desired to stimulate peristaltic action.

It would seem from this that phenolphthallein does not depend on increasing the flow of bile for its cathartic action.

That it is a safe aperient in the various forms of nephritis.

That it would be indicated where it was desired to produce watery evacuations without greatly lowering arterial tension.

Its action is doubtful in paresis of the intestinal canal and in those individuals who have overused powerful purgatives or taken opiates for a long time.

Phenolphthallein is a distinctly new form of cathartic, and I think possesses characteristics valuable enough to commend it to our careful consideration.

I believe it will be one of the aperients of the future.

#### Eye Disease Due to Autointoxication.—

ELSCHNIG ascribes to gastrointestinal autointoxication, as evidenced by the presence of indican in the urine, especial prominence in the etiology of many serious diseases of the eye. According to the author's observations, this condition exerts an important influence in internal ophthalmoplegia, more rarely in paralysis of the extraocular muscles, and in diseases of the optic nerve. His experience corresponds with Sachs' observation, that it is an important accessory in tobacco and alcoholic amblyopia. Many cases of recurring keratitis, recurring scleritis, episcleritis periodica fugax, recurring iritis and insidious iridocyclitis

appear to be due to gastrointestinal autointoxication. Many patients with the last mentioned diseases present signs of hereditary lues, but anti-luetic treatment is without effect. Probably the hereditary lues produces changes in the glandular apparatus of the intestinal tract or in the innervation of the intestine which alter the chemistry of digestion as well as the products of decomposition, and thereby cause autointoxication. In all the diseases cited, regulated diet, long continued and oft repeated intestinal disinfection have effected a marked improvement or a complete cure where other therapeutic measures failed.—*Münch. med. Woch.*, Oct. 10, 1905.



## IMPORTANT DISCOVERIES AND PROGRESS IN MEDICAL SCIENCE SINCE THE TIME OF HIPPOCRATES\*

P. H. QUICK, M. D.,

Olivet.

The science of medicine consists almost entirely of the applications of the principles and methods of other sciences to the study of medicine. New discoveries and developments along physical and chemical lines are quickly applied to medical research and lead to new developments in this field. The oculist in fitting a pair of spectacles and the microscopist making his observations, are largely carrying out applied optics. The clinician, tapping the chest or listening to the sounds of the heart, is simply working in the field of applied acoustics. The analysis of the urine and of the stomach juices are purely chemical procedures, yet this fact is often overlooked so distinctly a medical operation has it become.

Before other sciences were developed and until our medical knowledge was considered in the same light as botany, geology, etc., medicine could not be called a science. In fact it is only within the past few years that it has approached anything like a scientific study.

The early history of medicine is pregnant with interest, and the old superstitions and whims are fascinating in the extreme. In the early period, the priests and teachers were looked upon as being the chief sources of wisdom in the land. The priests combined the office of healers of the body with that of teachers of religion. The three sciences they chiefly

studied were astronomy, theology and medical botany. As chemistry was not developed, the treatments were mainly confined to concoctions of herbs and other substances. They believed some herbs to be endowed with magical virtues. Prominent among them was one used to anoint the person to prevent fevers, to procure friendships, and in fact to secure anything the heart might desire.

As early as 430 B. C., the art of medicine was protected and encouraged by the state. Medicine, commerce and navigation were called the three civil arts, each of which had a corporate privilege.

One of the laws of ancient times deals with the offices and privileges of a mediciner, or physician, with an account of his duties and fees. He was liberally rewarded when the patient recovered, but a penalty was attached if the patient did not recover or an operation proved a failure.

A few receipts taken from an old collection will illustrate their meagre knowledge of drugs and their uses, and what a part superstition played in their treatment.

The following was given for falling sickness: "Burn goat's horn, directing the smoke upon the patient and in consequence of the smell he will forthwith rise. Before he has risen from the ground, apply dog's gall upon his head and the disease will not attack him again."

They also had a favorite one for pain in the eye, consisting of "the gall of a hare, of a hen, of an eel, and of a stag mixed with fresh urine

\*Read before the Eaton County Medical Society, January 25, 1906.

and honeysuckle leaves and the gum from an ivy tree," that was said to be so efficient that it would cause one to see stars in the day time, in consequence of its great virtue.

The priest, under the mental and social conditions in which this combination has usually been observed, relied upon his magic rites, and his incantations appealed to the superstition and ignorance of the sufferer. Should he discard such means, his influence would vanish. Knowledge, reason and logic are essentials to him who essays to heal the sick, hence it was inevitable that as intelligence increased, the function of the superstitious priest should be divorced from that of the physician.

This separation of medicine from priestcraft has not occurred as a chronologic sequence, but is a logical and evolutionary one. Just when priestcraft, superstitions and magic were discarded in the treatment of disease cannot be stated, but the separation is attributed to Hippocrates, the most celebrated physician of antiquity, of whom it was said that "he was a sworn enemy of charlatans."

True medical history had its beginning with Hippocrates. It was he who put the science of medicine on a rational basis. Not only did he observe facts but he and his followers liberated medical art from mysticism. In his works, he firmly established the "Method of Observation" reaching the truth through intuition, anatomy and physiology being unknown to him. The key to his fame is to be found in the following words which occur in his writings. "We must extract the rules of practical medicine from experience, directed by reasoning." Although highly esteemed, at the time, as a physician and author, his teachings seem crude compared with our present knowledge. The

four fluids of the body, the blood, phlegm, yellow bile and black bile were regarded by him as the primary seats of disease. Health was the result of due combination of these, and illness was the consequence of their disturbance.

Galen, who flourished during the first century of the Christian era, was, next to Hippocrates, the greatest of the ancient fathers in medicine. He translated into Latin the works of Hippocrates, studied anatomy and physiology, introduced a new theory of disease—the theory of distempers, with appropriate remedies for relieving them.

For several centuries following the days of Hippocrates and Galen, known in medicine as the "Dark Ages," but few advances worthy of mention were made. During this period the profession of surgeon and barber were united, and it is from this that we get our striped barber pole, the red stripes representing blood shed in surgery.

Ambrose Paré, a barber surgeon, gave to the world the method of using a ligature for tying bleeding vessels, in place of using boiling tar, oil, or hot sulphur, as was formerly used to arrest hemorrhage.

The seventeenth century witnessed the discovery of the circulation of the blood, by Harvey, as well as many discoveries in anatomy and physiology. About this time, clinical instruction was introduced into hospitals and systematic post-mortem examinations were made with an endeavor to connect, wherever possible, morbid changes found within the body with the history of the patient's disorder.

The two great factors which enter into the present epoch of growth are the study of pathology and the practical methods of clinical research. Both of these had

their beginning in the eighteenth century.

Prior to this, dependence in diagnosis was placed entirely upon symptoms as related by the patient, the naked eye appearance of the body and such changes in temperature as could be detected by the hand. When people began to associate symptoms with the pathologic conditions found, improvements and discoveries to assist practical methods of clinical research made rapid strides.

Avenbruger first discovered that by tapping the chest, different sounds were produced, and from the varying resonance of the sounds, an opinion can be formed of the internal condition of the cavity. After years of study and observation, verifying his observations by dissections and by the appearance of the diseased tissue after death, he published his results in 1761. It was several years later before the profession were convinced of the value of percussion, its utility then being impressed upon them by Corvisart, a French physician and medical adviser to Napoleon Bonapart.

Closely connected with this is the discovery made by Lænnec, in 1815, of placing a hollow cylinder of wood or paper next to the ear and against the patient's chest in order to listen to heart sounds and murmurs of the lungs during respiration. Simple as this seems, no one thought of practicing it for some years after the value of percussion had been demonstrated.

In 1797, Currie demonstrated the practical use of the thermometer in disease. In this century also, was made the immortal discovery of vaccination by Jenner, one of the greatest boons the human race has ever received. After spending 22 years investigating this discovery and after an expenditure of thousands of

pounds, his results were made known to the public in 1796. It is claimed that no single scientific truth has been so fruitful in the salvation of life, as that introduced by Jenner.

For generations those whose mission it was to alleviate human ills by surgical means, sought for some means by which to allay the pains which they were obliged to inflict upon their patients. The victim of a surgical operation was often drugged and nauseated or benumbed into a condition of semi-sensibility by toxic doses of opium, alcohol or even nicotine. The discovery which came as a revelation, to rob surgery of its bitter pangs, was wholly American.

Dr. Wm. J. Morton, a young dentist of Boston, full of energy and enthusiasm, realizing the great need of some means of alleviating suffering, experimented for several months with different drugs until finally he hit upon a drug which he found, by experimenting upon animals, to be absolutely satisfactory. Full of eager enthusiasm and absolutely confident of his results he went to Dr. J. C. Warren, one of the leading surgeons of Boston, stating to him that he had an agent which would produce unconsciousness and insensibility to pain and begged an opportunity to try its merits. The request was granted and accordingly on Oct. 16, 1846, in the presence of several of the foremost surgeons of the city, Morton administered the mysterious substance, which he termed "letheon" to a patient, from whom Dr. Warren proceeded to remove a tumor of the neck.

The patient slept quietly while the surgeon's knife was plied and awoke to astonished comprehension that the ordeal was over. The impossible, the miraculous, had been accomplished. The same success attended subsequent operations, but in a short time the surgeons of the hospitals refused to countenance Morton's discovery further, unless he revealed its nature. He yielded and "letheon" proved to be nothing but sulphuric ether. Swiftly as steam could carry it, the news was heralded to all the world. It was received in Europe with doubt, which vanished before repeated experiments.

Then there came a lingering cry by a few surgeons that the shock of pain was beneficial to



the patient, hence that anesthesia, as Dr. Oliver Wendell Holmes had christened the new method, was a procedure not to be advised.

And, too, there was a hue and cry from many a pulpit that pain was God-given and hence, on moral grounds, to be clung to rather than renounced and when it was advocated "to administer an anesthetic not only in surgery, but to suffering woman in time of sorest need," its advocates were advised to read and ponder over the 16th chapter of Genesis, where it reads: "Unto the woman he said, I will greatly multiply thy sorrow and thy conception: in sorrow thou shalt bring forth children."

To all these arguments, counter arguments were given and the opposition was cited in the closing verses of the 2nd chapter of Genesis which they claimed to be the true and authentic record of the first instance of the use of an anesthetic, by which a precedent was established for all the similar emergencies. "And the Lord caused a deep sleep to fall upon Adam and he slept and he took one of his ribs and closed up the flesh instead thereof."

So popular did the method become and so anxious were unfortunates to be relieved from suffering needless pain, that within a few months after that initial operation at the Boston hospital in 1846, ether had made good its conquest of pain throughout the civilized world.

The development and perfection of the microscope in the second and third quarters of the past century, added a mighty weapon to the physician's armamentarium. The microscope was an aid to investigations along many lines, and was the *one* necessary means by which the teeming world of bacteria was made visible.

The discoveries and knowledge which have come from a study of these infinite organisms during the last score of years, has completely revolutionized medicine and surgery. The wonders that have been, are, and will be revealed by the microscope excite in the mind of every true physician a feeling of intense admiration, an admiration verging on reverence. Without the microscope, we would still be ignorant of many of the well known

diseases of the various organs of the body, and most of those affections dependent upon animal and vegetable parasites would have remained unknown and undiscovered.

More than two centuries ago investigators were able to see living micro-organisms in all forms of decomposing substances and believed that similar organisms existed in diseases which might be due to this agency. This theory received but little attention, however, until by means of better instruments, later investigators were able to describe more accurately what they saw.

At various times, investigators attempted to take up and prove their theory but soon it came to be regarded as an obscure hypothesis. The natural history of the micro-organisms, however, never lost its interest to scientists and late in the eighteenth century it was again taken up and considerable advancement was made, but it remained for the master mind of Louis Pasteur, a French chemist, in 1861, to collect the scattered facts of the early discoveries and establish the rôle played by micro-organisms in the processes of fermentation and putrefaction.

There was nothing in these studies bearing directly upon the question of animal diseases, yet before they were finished they had stimulated progress in many lines of pathology and blazed the way for others in the study of bacteria as agents, not only in putrefaction and fermentation, but also in pathologic infections in animals.

In 1876, Pasteur was again prevailed upon to take the matter in hand and establish some relation if possible, between germs and animal diseases. The great chemist was becoming more and more exclusively a biologist as the years passed

and, aided by his former experiences, he was soon able to demonstrate beyond a doubt that the disease anthrax, a disease common among animals of Europe, was due to the introduction into an animal's system of a specific germ which develops there. No logical mind could doubt that what was proved true in one infectious disease, would some day prove true also of others, perhaps of all infectious diseases.

About this time Robert Koch, a German, discovered methods by which a differentiation of bacteria was made possible and by these means, during the 20 years following, there has been isolated the specific germ causing tuberculosis, typhoid fever, cholera, diphtheria, pneumonia, erysipelas, gonorrhea, epidemic dysentery, plague, glanders and many other diseases.

Hitherto the cause of contagion by which certain maladies spread from individual to individual, had been a total mystery. Now for the first time the world knew and physicians were enabled to apply the drug treatment more rationally. Medicine thus took another gigantic stride toward the heights of an exact science. The march of science, however, was not to be arrested at this point. The genius of Joseph Lister, later Lord Lister, applied the germ theory to surgery which brought about a condition long yearned for by surgeons throughout the world. Lister, aided by the results of Pasteur's researches, arrived at the conclusion that suppuration, or pus formation, was due to decomposition or putrefaction and naturally evolved the idea that if decomposition of blood serum and destroyed tissue in wounds could be prevented, nature would repair much in the same way as she did in the case of simple

fracture. He began with the supposition that the air contained the germs which are most active in producing suppuration and disease. It had been the custom until Lister's time, to use ordinary forms of cleanliness in preparing instruments, ligatures, etc., but no effort was made to free them from germs. Lister's investigations showed the utter inadequacy of such preparation. His most important object lesson, however, was that everything that came in contact with flesh or bleeding wounds might carry infection, unless it had been itself freed from their presence. The original method of Lister was very elaborate, including a continuous dissemination throughout the air of the operating room, of a vapor of carbolic acid which was, of course, disagreeable, sometimes being almost fatal to operators and bystanders. The instruments were placed in strong antiseptic solutions, which were pungent and irritating.

Hardly had this theory reached completion before investigators began to modify and improve upon it. The simplicity of the problem at last became apparent.

The surgeon who works antiseptically, begins by attempting to destroy bacteria and throughout his work continues the process of destruction, not only of bacteria, but often the vitality of the tissues themselves by the antiseptic used. The surgeon who works aseptically attempts to remove all bacteria from everything which is to come in contact with the wound, to prevent the entrance of bacteria into the wound and to avoid the creation of a single condition favorable to germ life.

Since 1890, the old antiseptic method has given place to asepsis, which forms the corner-stone of the foundation of

modern surgical science. This together with the acquired skill of modern operators is what has enabled such marvelous results to be accomplished today in the surgical field.

Listerism in surgery had now shown how much might be accomplished toward preventing the access of germs to abraded surfaces of the body and how to destroy those that had already found lodgment there. As yet, however, there was no way known by which a corresponding onslaught might be made upon those other germs which find their way into the animal organisms by way of the mouth and the nostrils and which, as is now clear, are the causes of those contagious diseases which claim so large a proportion of their victims. How such means might be found now became the anxious thought of every imaginative physician.

The world was not kept long in waiting, as almost before the proposition had taken shape in the minds of other leaders, Pasteur, that tireless worker, had found a solution.

Guided by the success of Jenner, he had long practiced inoculation experiments upon animals, and in 1880 he announced that he had found a method of reducing the virulence of disease germs similar to that of vaccination against smallpox.

The particular disease experimented with was that infectious malady of poultry known as chicken cholera, but he did not hesitate to assert his belief that the method could be applied to other diseases than the particular one in question. Within a few months he made good his prophecy by announcing that he had produced an attenuated virus of the anthrax microbe by the use of which he could protect sheep against that fatal disease.

It was now a foregone conclusion that the principal thus established would be still further generalized; that it would be applied to human maladies and sooner or latter would grapple successfully with many infectious diseases. That expectation has advanced rapidly toward realization.

Pasteur, himself, made the application to the human subject in the disease hydrophobia, in 1885, since which time that hitherto fatal malady has largely lost its terrors. Thousands of persons bitten by mad dogs, have been snatched from the fatal consequences by this method.

Nuttall conclusively demonstrated, in 1888, the power possessed by the blood serum of combating the poisonous products of bacterial growth, but to Berhing and Kitasato belongs the credit of having found in 1890, a practical method of utilizing antitoxins in the treatment of disease.

After Loeffler had isolated the specific germ causing diphtheria and was able to produce the disease in animals by inoculation, experiments were carried out showing that the fatal results following this disease were not due to any extension of micro-organisms within the body but to the absorption of a poison or toxin produced by the germ in the process of its growth. These toxins they argued, are accountable for the fever, the prostration and other general symptoms as well as for the anatomical changes in the immediate neighborhood of the growing germs. So long as they continue to be produced, the disease progresses. But hand in hand with the production of these poisonous substances there are produced, presumably by the cells of the body, certain antagonistic substances which tend to neutralize the toxic principles. These antag-



onistic principles have been called "anti-toxins."

The toxin produced by the disease could be separated from the bacilli causing the disease, and investigators set about to discover some means by which this toxin could be neutralized in the body by some artificially prepared anti-toxin.

To Berhing belongs the credit of bringing before the world the first anti-toxin product. The introduction of this treatment for disease has reduced its nature from being one of the most virulent in character to one of comparative innocence. It is now considered almost absolutely harmless and a specific for the disease, having reduced the death rate from over 40%, since its introduction in 1894, to below 10% at the present time.

While the serum treatment has not proved successful in all the diseases in which it has been used, yet it has been so successful in some as to firmly establish the principle of serum treatment, and we have much to hope for along this line in the future.

Roentgen, of Wurzburg, in 1895, stated that he was able to penetrate opaque objects by what he called the X-ray. The announcement was received with astonishment not unmixed with doubt.

All now recognize its extraordinary value for diagnostic and other purposes and its use, which is already general, is daily extending. The wonderful results which have attended certain manifestations of light and electricity, when applied for therapeutic purposes, have also astonished us and lead us to believe that

medical science is still in a nascent state and that a new era in medicine is about to dawn in which the far reaching serums and other methods may displace those we now consider more or less effective.

The nineteenth century has astonished us with the wealth of its products, but the coming century promises marvels just as great. Medical schools are awakening and are being transformed into centers of productive research work as well as scientific training schools.

Today the problems of immunity and preventive medicine are uppermost and are the natural consequences of the scientific thought that has been erected during all these years.

And now having followed the story of our art over 3,000 years and more, from the dim and misty past, of incantations and superstitions, from the early days of Grecian civilization, when Hippocrates made a specialty of medical science separating it from the other sciences, to the days of Jenner with his important discovery of vaccination, followed by developments in anatomy and physiology, more exact methods in diagnosis made possible by the discovery of the thermometer, the stethoscope, the microscope and other devices, to the discovery of ether, by which surgery was rendered painless, and bacteriology by which it was made safe and placed preventative medicine on a rational basis, we can pause to ask whether, after all these developments, human suffering has been mitigated or human life greatly prolonged.

To both of these questions our answer is an emphatic yes.

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### Editorial.

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#### SOME PHASES OF THE CANCER PROBLEM.

While there are still many mysteries connected with medical science and many problems which have not as yet been solved, the one great question remains unanswered—the etiology of carcinoma. This problem has been approached from many different sides by many different workers, and at the present time there is scarcely a laboratory in the world where there are not keen, clever and industrious men striving to master the subject.

One great obstacle which has prevented experimental work on cancer has been the great difficulty in producing the disease in laboratory animals. Many of the problems connected with bacteriology were comparatively quickly worked out, because it was possible to study the effects of inoculation from animal to animal. Not so, however, with carcinoma. At least not until recently.

The Walker Prize, awarded at stated intervals in London, for the best work on the pathology and therapeutics of cancer, has just been voted to Professor Carl Jensen of Copenhagen, the discoverer of the familiar "Jensen Mouse Tumor." His work has afforded an almost unlimited amount of material for study and has made possible experimental in-

vestigation on a large scale. Jensen first conducted a large series of inoculations through one thousand mice, comprising thirty-five generations, and numerous laboratories are now supplied with this living material. A moment's thought will impress one with the wonderful opportunity which this never failing supply of material affords. It is now possible to test, in whole series of animals, the effects of various physical agencies, such as heat, light, electricity and radium, of various chemical agents and of various solutions of the different enzymes. A whole new field has been opened up.

It was not only the work which Jensen himself has done which influenced the award, but also the opportunities which he has given to the workers the world over, opportunities which will enable them to carry out their investigations over long periods of time and under better conditions than ever before. Mayhap something will come of it.

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One phase of this question, or at least an hypothetical cure which is directly dependent upon the mouse tumor has been pretty thoroughly discussed of late in the lay press. The public prints have been inspired by an article which recently appeared in a magazine from which we expect better things. When a Journal with the prestige and influence of *Harper's Weekly* proclaims in bold faced head lines "The Coming Conquest of Cancer," wide attention is sure to be given to the subject. This would be well enough, were there a reasonable basis for such an assertion. The author who writes under this alluring and alliterative title is Dr. C. W. Saleeby, the eminent author of the "Cycle of Life." The

author first disposes (to his own satisfaction and perhaps correctly enough) of two or three fallacies concerning the cancer problem—He says, “First of all, let me positively deny the widespread assertion that cancer is increasing among us.” “My second point is that recent statistical inquiry throws much doubt upon the common belief that the tendency towards cancer formation is transmissible by heredity.” “My third point is that we are not justified in believing or suggesting that cancer is an infectious disease.”

Saleeby then goes on to review the work by which Dr. John Baird of Edinburgh has attempted to prove that a cancer is the product of the Weismann germ cell. According to this theory, the germ cell, which is parthenogenetic, is arrested at the “critical period” and “precisely at this critical period, the pancreas wakes into activity and its alkaline product actually digests the structures corresponding to the parthenogenetic stage of development—the structure which Beard calls the trophoblast; a cancer, let us remember, being a late developed and ‘irresponsible trophoblast.’”

Having arrived thus far, it is an easy step to the supposition that the secretion of the pancreas—*trypsin*—is the long sought cancer cure. Saleeby then goes on to say that Beard’s experiments have proven this to be true, ending his article with the words, “Only the philosophic few could have guessed for a moment that Dr. Beard’s long and famous researches would ever enable him—as they would indeed appear to have enabled him—to place in the hands of the physician, a veritable cure for cancer.”

Is it any wonder that the press has been filled with announcements that can-

cer is now curable? Is it any wonder that we are receiving most enthusiastic circulars from manufacturers who are putting trypsin on the market for this purpose? Read *Harper’s Weekly* and these circulars and you are convinced. Read Beard’s article—and what is the evidence?

Two mice, with Jensen’s tumor, were treated with trypsin injections. After four treatments, one became caught in the cage and died. The other mouse received nine injections and was killed on the twenty-second day. The tumor had decreased in size and, as in the other also, there was degeneration of the cancer cells. Baird then says, “Though the number of experiments is small, already they have established what in advance I knew they would. In advance I knew that no matter how often we repeat this experiment, even with much smaller doses, the like results will invariably be obtained.”

It may be so because the author of the hypothesis knows that it is so, but the fact remains that the evidence which must establish the truth of what we read, in the magazines, daily papers and advertising circulars—the real evidence—rests on the shoulders of one—or at most two—poor little mice.

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It is wrong for any one to belittle the efforts of scientific workers. Far be it from us to do so. This work of Baird’s is most important, but there is no evidence that it is more than suggestive, and it is wrong for a scientific man to say that an experiment proved what he knew it would and that the result will invariably be the same. He should not say so, at least until he has more than one instance to prove it. It is wrong



for a great and influential paper to publish such extravagant statements, particularly on such an important subject. It is wrong, too, for a respected firm to get out literature such as we have recently been receiving.

Many human lives are sacrificed on the altar of every new cancer "cure," which becomes widely and popularly exploited. How many lives this article in *Harper's Weekly* must answer for may never be known. There are today physicians, all over the country, injecting trypsin into cancers—in some instance probably where an operation would mean a life saved—and they are doing it on the testimony of one white mouse.



### MILK CHARITIES.

A very important part of our present day philanthropy is the various movements to improve the conditions of the poor during the first year of life and so lessen both the unnecessarily high infant mortality and also the abnormal development of the surviving portion of the race. Statistics show that good results have followed the work of the past few years. Without question, one of the most successful efforts, has been that of supplying suitable food in this age, when so many mothers are unable to nourish their offspring.

Institutions for furnishing pure, fresh, properly prepared milk for babies and means for instructing the mothers in some of the first principles of maternity have become an established feature in the charity work of many of the larger cities in this country and abroad, and in several instances have come under municipal control. It was through the efforts of two men of France, Doctors Dufor and

Variot, that men and women first found inspiration to labor in behalf of the infant, resulting in the organization of the now famous *Gouttes de Lait*.

Dr. Geo. W. Goler, Health Officer of Rochester, N. Y., in a paper, read before the First International Congress of the *Gouttes de Lait*, Paris, October, 1905, said that it is now a little more than fifteen years since the establishment of the first milk station in France. These years of work have shown marvelous results. From France, similar institutions have spread throughout the world until now nearly every civilized country has either established work along similar lines or has felt the influence of what has been accomplished by their neighbors.

To Dr. T. M. Rotch, of Boston, the originator of the percentage method of infant feeding, must be given the credit for the pioneer work in this philanthropic movement in the United States. Very shortly after the establishment of the first *Gouttes de Lait*, the Boston Milk Fund Association began its work. Since then, in our own country, milk charities have been established in New York City, Rochester, Chicago, Baltimore and Detroit. Others are being organized.

The Boston Milk Fund is supported by the general public. The mother takes her infant to one of the hospital dispensaries where it is examined by the physician in charge and a proper order on the milk laboratory given. This prescription is marked "Milk Fund," which indicates that the mother pays what she can afford and the charity does the rest. This milk used is the pure, clean, scientifically prepared milk furnished by the Walker-Gordon Company.

The Straus Milk Charity of New York is the result of the liberality of Mr.

Nathan Straus. It furnishes from milk stations in various parts of the city, pasteurized milk, from the best source possible, for infant feeding, without the added cost that such production usually involves. Since 1898, Rochester has conducted Municipal Milk Stations and more recently, Chicago, Baltimore and Detroit have taken up the work, along one or the other of these lines.

Just about a year ago, the Detroit Milk Fund was organized with Dr. C. G. Jennings as Medical Director and a Board of Trustees, composed of young married women. The following appeal was sent to those whom it was thought would support such a charity:

"The Trustees of the Detroit Milk Fund appeal to the citizens of Detroit and vicinity in behalf of the sick babies who will be recipients of their charity. \* \* \* \* \*The very large mortality among infants which follows as a result of diseases induced by hot weather and by infected milk is exceptionally high in this city. This condition can be greatly improved by a proper regulation of the milk supply and by a proper modification of the milk on which these babies are fed.

"The charity is practical, wholly unsectarian, will be economically dispensed and prompt in its application. It has the endorsement of a large number of the most representative physicians and women of Detroit.

"The babies who are to be recipients of the Milk Fund will be continually under the care of the physician in charge of the different hospital dispensaries. The record of each will be kept and none will be permitted to remain upon the list unless the physician in charge of the case sees his patient every week. The people whom this charity benefits are ex-

pected to pay what they can afford, so that the charity is in no way a pauperizing one."

The appeal was made doubly impressive by the disclosure of the high infant mortality existing in Detroit. *This exceeds that of any other city in the North, equally large, with the single exception of Philadelphia.* As Detroit is a clean city with a safe water supply, a temperate climate, and no crowded tenement district or labor problem such as confronts New York City, there could only be one explanation for this high mortality—the bad milk supply, together with ignorance on the part of mothers.

Objections made to this charity, were that it might pauperize the people by giving something for nothing and that the milk would be used by a lot of children who had better die anyhow. The recipients of this pure milk were truly grateful. Those who were able to do so paid what they could afford. The majority were willing to pay 5c per day, the usual price of store milk, some considerably more. In regard to the second criticism, it is unworthy of an answer.

In most instances, milk charities have been organized as separate establishments, as the Straus charity of New York City, or have been conducted in connection with hospitals or dispensaries, as in Chicago, Baltimore and Detroit. This is without doubt, the way most of this work will be carried on for some time to come, but "since it is one of the duties of the State to provide means of curing disease, why is it not within its province to furnish the agents of its prevention?" Thousands of infant lives are needlessly sacrificed annually because of impure milk. *No system of milk tests or examination now in operation, capable of*

being generally applied, is sufficient to protect the lives of young children against the noxious germs present in a large portion of the milk delivered in our cities. Even with the most rigid methods of inspection, it has been shown that a sufficient number of milk dealers cannot be found whose milk will come up to a safe standard for infant feeding. So long as this is true, the whole milk supply of every city should be under Municipal Management and control and special arrangements should be made for dealing with the milk intended for infant consumption. Rochester is setting the example which other cities should follow.

The Detroit Milk Fund is now beginning its second season of work. It should have hearty support both from the profession and the laity.

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### Book Notices

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**A Memoir of Dr. James Jackson.**—By James Jackson Putnam, M. D. Cloth, octavo; 456 pages; 30 illustrations. Price \$2.50 net. Houghton, Mifflin & Company, Boston and New York, 1906.

Too little enthusiasm has been given to the study of American Medical History, and in consequence, medical biographies are few in number. We welcome every book which will place before us the facts in the lives of our pioneer practitioners and teachers, for each addition not only enriches the history of medicine in America, but it also serves as an inspiration and a help.

No more delightful biography has appeared than that of Dr. Jackson, of whom Oliver Wendell Holmes said: "James Jackson, a man of serene and clear intelligence, not over book fed, truthful to the center; a man who forgot himself in his care for others and his love for his profession; by common consent, recognized as a model of the wise and good physician."

Part I., comprising about one-third of the book, is given up to the genealogy of the Jacksons and to short biographies of the four talented brothers who lived in and about Boston. Part II. concerns Dr. Jackson, and his eminent confreres, the most notable of whom was John Collins Warren, between whom and the subject of the

biography, there was the closest intimacy for many years.

An interesting account of Jackson's student days in Europe is followed by an account of his return in 1800, when he did much to popularize vaccination which had been introduced into New England a few months previously by Dr. Waterhouse. In those days advertising in the papers was not *infra dig*, and the following quaint "liner" appeared in the *Columbian Centinel* in October, 1800: "Dr. Jackson informs the public that he has at present a supply of cowpox and inoculates for the disease."

Much interesting and instructive matter is presented, bearing on the early years of the Harvard Medical School, in which Dr. Jackson was the first professor of Clinical Medicine (1800). Indeed, we believe, he was the first to hold this title in America.

The Massachusetts General Hospital was opened in 1821 and Jackson was prominent in its inception, construction and organization. It was of his daily visits there that Holmes wrote: "I have seen many noted British and French and American practitioners, but I never saw the man so altogether admirable at the bedside of the sick as Dr. James Jackson. To visit with Dr. Jackson was a medical education."

The great grief of Jackson's life, the death of the talented James Jackson, Jr., is pathetically related and many new facts concerning the son are given.

Jackson died in 1867.

No one can read the memoir of one of America's most eminent practitioners without feeling the inspiration which ever comes from learning the facts in the life of an ardent and honest man. Were it widely read, our profession would not be the loser.

The book is admirably illustrated, the portraits being for the most part, photogravures.

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**Nervous and Mental Diseases.**—By Archibald Church, M. D., Professor of Mental and Nervous Diseases in the Northwestern University Medical School, Chicago, and Frederick Peterson, M. D., President of the State Commission in Lunacy, New York, etc. 937 pages, 341 illustrations. Fifth edition, thoroughly revised. Cloth \$5.00, sheep \$6.00. W. B. Saunders & Co., Philadelphia.

That the favor with which this work was first received in 1899, has not waned, a fifth edition within seven years amply attests. The whole has been thoroughly and carefully revised and presents 100 more pages than were contained in the first edition. It is not by large or notable additions that the book is changed, but here and there its English is made more clear; a para-



graph is amplified here and a chapter there, so that this edition is brought thoroughly up to date. The scholarly touches given it make this later edition a distinct advance upon those which have preceded it. New illustrations, new tables, and added matter in various parts greatly improve the work. Dr. Peterson hesitates to accept all of Kraepelin's teachings and rather protests against abandoning mania as a distinct entity; but he adds chapters upon Manic-depressive Insanity and Dementia Praecox. The section upon mental diseases, while not exhaustive, is clear and practical.

The style of the whole is at the same time scholarly, terse, and eminently practical and the work will find a welcome place upon the shelves of all who desire an up-to-date text-book upon Nervous and Mental Diseases.

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**A Text-Book of Diseases of Women.**—By Barton Cooke Hirst, M. D., Professor of Obstetrics, University of Pennsylvania. Second edition, revised and enlarged. Octavo of 741 pages, with 701 original illustrations, many in colors. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, \$5.00 net; sheep or half morocco, \$6.00 net.

Hirst's "Text Book of Gynecology," which appeared in 1903, was instantly recognized as an admirable one and the demand for it necessitated a reprint very soon after the first copies appeared. After waiting some two years, in order that newer material might be incorporated, a revision was undertaken and this second edition is even better than the first.

The feature of the volume which will directly appeal to the profession in general is the special attention which has been given to those methods of treatment which can be carried out by him who is not a specialist and who does not do operative work.

Indeed, throughout the book great stress has been laid upon diagnosis and treatment, and the section devoted to a detailed description of modern gynecic operations is without doubt the most clear and concise we have yet read. In this second edition the revision has been thorough, introducing, however, only such matter that promises or has been demonstrated to be of permanent value. Forty-seven new illustrations have been added and thirty of the old ones replaced, the work now containing a collection of seven hundred and one beautiful original illustrations, many of them in colors. We take much pleasure in recommending Dr. Hirst's work to the medical profession generally.

**The Medical Diseases of Infancy and Childhood.**—By Alfred C. Cotton, A. M., M. D., Professor of Pediatrics in Rush Medical College. Cloth, 670 pages, 219 illustrations. \$3.50. J. B. Lippincott Company, Philadelphia.

The latest addition to the large number of works on pediatrics which have recently appeared is that by Cotton.

To cover the medical diseases of infancy and childhood in 600 pages is a difficult task. Of necessity, differences of opinion must be omitted and the ideas of the author given somewhat dogmatically. This makes excellent reading for students, because the mind is not confused by conflicting statements. Cotton's style impresses one rather as authoritative than as dogmatic.

It is to be commended that a relatively large proportion of space is devoted to the anatomy, physiology and hygiene of the developing period.

The book is systematic, taking up the various topics in regular order. It is well indexed and well printed. As a short treatise on the subject, the work is to be recommended.

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**International Clinics.**—Vol. I., 16th Series, 1906. 309 pages, 7 figs., 29 plates, 9 of which are colored. Cloth. Price \$2.00. J. B. Lippincott Company, Philadelphia.

The articles in this number of the International Clinics are even better than usual. The volume opens with five articles on treatment. One of the four articles on medicine is that on "The Origin and Preventive Treatment of Oxalic Acid," by Professor Klemperer, of Berlin. It is short but particularly good.

A readable and important contribution is that by Cumston on the "Importance of the Pulse in Surgical Disorders."

The progress of medicine during 1905 is reviewed by Stevens, Edsall and Bloodgood, in a concise yet practical manner.

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**A Text-Book of Materia Medica, Therapeutics, and Pharmacology.**—By George F. Butler, Ph. G., M. D., Associate Professor of Therapeutics in the College of Physicians and Surgeons, Chicago. Fifth edition, thoroughly revised by Smith Ely Elliffe, M. D., Ph. D., Professor of Pharmacognosy and Instructor in Materia Medica and Therapeutics in Columbia College (College of Physicians and Surgeons), New York. Octavo of 694 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, \$4.00 net; half morocco, \$5.00 net.

For this fifth edition Dr. Butler's text-book has been entirely remodeled, rewritten, and reset, bringing it in accord with the new (1905) Pharmacopoeia. All obsolete matter has been eliminated, and special attention has been given to the toxicologic and therapeutic effects of the newer compounds. We notice with much satisfaction

that the general arrangement of the book has been so changed that those drugs the predominant action of which is on one system of organs of the body are grouped together, thus suggesting their therapeutic as well as their pharmacologic, alliances. We believe this classification to be more thoroughly practical and useful than any other. By use of a more compact type the work has been reduced in size. It is a pleasure to us to recommend this book to the profession, for it is no doubt the most thorough, and in every way the best on the subjects it includes.

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**The International Medical Annual**—1906, 24th year. Cloth, 572 pages, illustrated. Price \$3.00. E. B. Treat & Company, 241 W. 23rd st., New York City.

Treat's Annual is a resume of the year's medical literature and as such is a distinct help in many ways. The editors are for the most part Britishers and the articles quoted are largely British. The alphabetical arrangement makes ready reference easy. These annuals are too well known to require recommendation.

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#### Books Received.

**Nervous and Mental Diseases.** By Archibald Church and Frederick Peterson. W. B. Saunders & Co.

**A Text Book of Diseases of Women.** By Barton Cooke Hirst. W. B. Saunders & Co.

**International Clinics.** Vol. I. 16th Series. J. B. Lippincott Co.

**Infection, Immunity and Serum Therapy.** By H. T. Ricketts. American Medical Association Press. (Notice next month.)

**Diseases of the Nervous System Resulting From Accident and Injury.** By Pierce Bailey. D. Appleton & Company. (Notice next month.)

**A Primer of Psychology and Mental Disease.** By C. B. Burr. (Notice next month.)

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### Reports

#### THE AMERICAN CONFEDERATION OF RECIPROCATING, EXAMINING AND LICENSING MEDICAL BOARDS.

Report furnished for the JOURNAL by B. D. Harison, M. D., Secretary.

Meeting held at Columbus, Ohio, April 25, 1906. Dr. W. A. Spurgeon, President, Muncie, Indiana, in the chair. Dr. B. D. Harison, Secretary, Detroit, Michigan.

#### Report of Committee on Uniform Entrance and Graduation Requirements.

This Committee recommended as a substitute for Entrance Requirements to Medical Colleges, adopted at the Indianapolis meeting, 1905, the following: After July first, 1906, the minimum requirement for registrataion in a medical college shall be a recognized diploma from a four year high school, academy, college or university, or a recognized equivalent certificate, such diploma or certificate having the following minnum stand-ard:

Academic Work and Examinations 60 counts. Required 30 counts. (After 1906 35 counts.)

(A list of the counts in each subject is here given.)

A count to represent a recitation once a week for a school year. A diploma to be granted only after a recognized four year course. Conditions not to exceed a total of 15 counts.

Report was adopted.

NOTE.—The above schedule had been previously adopted by the National Curricula Committee of the Association of American Medical Colleges.

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#### Report of Committee on Modifications in Reciprocal Qualifications.

This Committee reported:

The following substitute under (A) "Prerequisite Credentials," adopted April 27, 1905, at Indianapolis.

As a prerequisite to reciprocal registration the applicant therefor shall file in the offices of the boards of the state of which he is a licentiate and the state where reciprocal registration is sought, such evidence of good moral and professional character as may be demanded by said boards, and such evidence at the discretion of either board may include proof of membership and good standing in a recognized medical society, and such membership may be considered in connection with the other evidence of character presented.

That the requirement under (B) of an affidavit relative to the abandonment of practice in the state from which applicant came, to be stricken out. Likewise the comments upon Qualifications "A" and "B" in the 1905 minutes to be stricken out.

That in Qualification No. 1 adopted by the Confederation at Indianapolis, April 27, 1905, the words "and provided that the applicant had been engaged in the reputable practice of medicine at

least one year in the state issuing the certificate upon which endorsement is sought" be stricken out.

The Committee recommended the recognition of a primary or junior board examination at the completion of the second year in a recognized medical college as follows.

That a certificate issued by a state medical board covering credits received in a primary or junior examination by said board may be received and given credit by the board of another state, provided such primary or junior examination shall only include the following subjects, which must have been completed to the end of the second year at least in a recognized medical college, in accordance with the Standard Medical Curriculum of the Confederation, namely:

Anatomy,  
Physiology,  
Chemistry,  
Toxicology,  
Histology,  
Embryology,  
Bacteriology.

Report was adopted.

#### Report of Committee on Advanced Standing.

This Committee reported:

The following substitute under first of the minutes of the 1905 meeting at Indianapolis is recommended:

That graduates holding the degrees of A. B., B. S., or equivalent qualifications, from a recognized college or university, may be given credits not exceeding one year, provided the applicant for such credits shall produce evidence which shall satisfy the state board of medical examiners in the state in which credit is asked, that the holder of such degree has taken within ten per cent of the work embraced in the minimum standard of requirements of the American Confederation of Reciprocating, Examining and Licensing Medical Boards in the following subjects:

Bacteriology,  
Histology and  
Embryology,  
Osteology,  
Comparative Anatomy,  
Physiology,  
Chemistry and Toxicology.

And provided, that any literary college which shall undertake this work shall in its catalogue announce that it will give this first year of a medical course.

The report was adopted.

#### Report of Committee on Uniformity of Forms.

This Committee reported:

The Committee would recommend a uniformity in reciprocal license application blanks, and that the following requirements at least be considered essential:

(a) A question which will reveal the past conduct and proposed attitude toward engaging in itinerant practice or objectionable advertising business.

(b) A comprehensive physical description sworn to by applicant and endorsed by those who make affidavits, as to his moral and professional standing; affidavits by applicant to be positive, instead of "to the best of his knowledge and belief." Intended residence not necessarily required.

(c) A certified copy of license which is used as a basis for reciprocity.

(d) A detailed statement of preliminary and medical college education.

The Committee would further recommend that a Committee be appointed to continue the consideration of this subject and report more fully at the next meeting.

The report was adopted and the Committee continued.

The President appointed the following Executive Committee, which shall include the President and Secretary:

Dr. Moses S. Canfield, Indiana; Dr. J. V. Stevenes, Wisconsin; Dr. George H. Matson, Ohio.

Dr. W. A. Spurgeon, Indiana, was re-elected President.

Dr. B. D. Harrison, Michigan, was re-elected Secretary.

The President in his closing address emphasized the point that the work of the Confederation was purely educational, and its resulting standards, qualifications and regulations were merely suggestive and intended as a guide and in the interest of uniformity rather than mandatory upon boards who held membership in the Confederation. The boards, however, were naturally expected to live up to the ideals of the Confederation in as far as their laws and local conditions permitted. He acknowledged the indebtedness of the Confederation to the very valuable assistance rendered by the Ohio State Medical Board, the Faculty of the Ohio State Medical University, and the visiting Deans of other Medical Colleges throughout the country in contributing to the success of the meeting by their presence and advice. He also especially referred to the great assistance rendered the Confederation by Pro-



fessor Charles F. Wheelock, representing the New York Board of Regents, and Dr. Fred C. Zapffe, Secretary Association of American Medical Colleges.

#### Notes From Report of Secretary.

The following states are members of the Confederation: Michigan, Wisconsin, Indiana, Iowa, Kansas, Kentucky, Nebraska, Maryland, Georgia, Illinois, Ohio, North Dakota, Nevada, Oklahoma.

The following states have joined the Confederation since May 1, 1905: Nevada and North Dakota.

The following states reciprocate under Qualification No. 1 only: Illinois, Ohio, New Jersey, North Dakota, Virginia, Wyoming and South Carolina.

The following states reciprocate under Qualifications 1 and 2: Michigan, Wisconsin, Indiana, Iowa, Kansas, Nebraska, Maryland, Minnesota, Vermont, Missouri, Nevada, Maine, Georgia and District of Columbia.

During the past year, as far as reported, 386 Certificates of Registration and Licenses were issued under Qualification No. 1, and 35 under Qualification No. 2, and 67, qualification not designated. Total under both qualifications, 488.

Total number of Licenses issued by thirteen states through reciprocity 720, of which 501 were issued under Qualification No. 1, 77 under Qualification No. 2, and 142, qualification not designated. No report received from nine other reciprocating states.

It will be noted that the following states reciprocate practically under the qualifications of the Confederation, although not actually members of the Confederation, but probable members in the near future: Minnesota, Vermont, Missouri, New Jersey, Maine, Virginia, Wyoming, South Carolina, District of Columbia and South Dakota.

Ohio reciprocates at the present time under Qualification No. 1 only, but recently has obtained an amendment from her legislature allowing for reciprocity under both Qualifications Nos. 1 and 2.

Maine has also recently obtained a similar arrangement.

Since the last meeting of the Confederation, Vermont has obtained from her legislature power to reciprocate under both Qualifications 1 and 2.

Michigan reciprocates with Wisconsin, Indiana, Iowa, Kansas, Nebraska, Maryland, Minnesota, Nevada, Maine, Vermont and Georgia under Qualifications Nos. 1 and 2, and with Illinois, Ohio, New Jersey, North Dakota, South Caro-

lina, Virginia and Wyoming under Qualification No. 1 only, and with District of Columbia in individual cases.

### County Society News.

#### DELTA.

At the autumn meeting of the Delta County Society the following paper was read by **Dr. H. W. Long**, of Escanaba:

#### EDUCATION AS A FACTOR IN THE PROPHYLAXIS OF VENEREAL DISEASE.

H. W. LONG, M. D., Escanaba.

As an introduction, it is well for us to know a few facts regarding our subject, and the necessity for some action toward the prevention of the spread and the suppression of venereal diseases. One-eighth of all human suffering is placed at the door of venereal disease. Between eighty and ninety per cent of men sometime in their lives contract gonorrhea and twenty per cent syphilis. Eighty per cent of deaths of women due to pelvic diseases are traceable to venereal infection. Twenty per cent of the blindness of infancy is caused from gonorrhea. It was eighty per cent previous to the institution of the Crede method of protecting the eyes at birth.

With this enormous percentage of venereal disease and few attempts to stop its progress, has not the time approached when active steps should be taken to combat it? Prostitution being the fountain head of eighty per cent of venereal disease we should give this subject our first attention. As prostitution has always been and will always be, it is useless for us to spend our time arguing for its elimination. It is an inevitable condition, although not to be encouraged. Regulation of prostitution has been attempted in many of the European countries and it is still in vogue in a few, but not with much success. Strict surveillance has proven a detriment rather than a benefit to this class. Therefore we must seek other methods of dealings with them. Let us educate these people. Instruct them in the dangers of infection, the results, and the great harm they may do in their position. Demonstrate to them the methods used to prevent inoculation, the care required when infected, and the necessity of a positive cure before resuming their habits. More effective results can be derived by education and improvement of sanitary conditions than by stringent laws and violent measures.

In the line of education, let us turn our attention to the physician as an indirect cause toward the spread of venereal disease. It is estimated that twenty per cent of physicians do not know when a case of gonorrhea is cured or when a syphilitic is considered non-infective. I have stated that eighty per cent of all venereal disease is contracted from prostitutes. I believe, that nearly all of the remaining twenty per cent can be traced to non-cured or latent forms of the disease, that have been pronounced cured or non-infective. This reaches the class that contract them innocently, namely, wives from their husbands, children from their parents or nurses, physicians from their patients and patients from their physicians and dentists, through infected instruments, soiled towels and dirty hands. Physicians should use greater care in treating their patients, and be more guarded in giving their decision on the cure of these infections, and should better familiarize themselves with their complications, in order that they may determine when the condition is cured.

Having passed on these two important topics as to the source of these evils let us consider what can be done toward their prevention by the instruction of the laity. Education of the masses is the most potent factor in the subject of prophylaxis. This will, undoubtedly, be a slow process, but will, nevertheless, meet with good results. It is a delicate subject and must be handled with tact to be effective. The physician from his intimate relationship with the family must assume the responsibility of instructor and adviser, he can by his knowledge and influence prevent many a youth from being misled, his health ruined, and posterity impaired.

There are several courses for us to take to make this task successful, of which I will note a few.

*High School Instruction.* Physiology as taught in our schools falls far short of its purpose and is both incomplete and misleading. It is taught by incompetent teachers and important topics are omitted. Physiology should be taught in the high schools by physicians who are able to impart their knowledge sufficiently clear and plain to be comprehended. Thorough instruction in sexual hygiene and the dangers of venereal diseases should be given to the respective sexes. This subject is too often overlooked and should be taken up at that time of life when most beneficial and not after the crime has been committed. I refer to physicians as teachers as they can converse and impart their knowledge with greater frankness and less timidity than a teacher or a parent.

*College Instruction.*—Teaching in higher insti-

tutions is also necessary. Classes on venereology and sexual hygiene have been instituted in several universities, the only one in this country to my knowledge being our own state institution. These classes have met with great success, and are well attended. In this connection I believe some good may result from the compulsory education on this subject in prisons, industrial schools, and other public institutions. The physician should endeavor to gain the confidence of the boys in the families he attends and talk to them on this subject, that they may know the truth and not grow up in ignorance or far worse, to be misled by the teaching of their associates.

Parents ought to talk to their boys, yes, and girls too, more freely, and if they are too timid, advise them to go to their family physician. Literature on venereology and sexual hygiene by recognized authority and distributed by the State Board of Health similar to those published by that body on other infectious diseases will be very effective. And here I desire to refer to Dr. Valentine's treatise on this subject which was given in part in the *Journal of the American Medical Association*, under date of July 4, 1905. These reprints should be copied and distributed freely, as the author has covered the subject very thoroughly and in a masterly manner. This literature would replace that of the blood and thunder type, patent medicine advertisements, and others poisonous to the mind, which, undoubtedly, have their effect to produce more evil and indirectly the spread of disease.

Legislation should be instituted prohibiting the publishing and distributing of this class of reading as well as the selling of patent medicine nostrums, and drugs. These are sold by people who are not familiar with the conditions which they claim for their remedies and the result is the development of chronic conditions which are far more dangerous than the original ailment.

Our hospital authorities do not recognize the outcome of negligence in the early stages of venereal diseases and the future suffering that may be obviated by prompt attention and proper care. They close the doors on these unfortunates, stating: "We cannot admit you now, but come around when your disease has developed into gonorrheal prostatitis or nephritis or your syphilis has caused cerebral tumor, locomotor ataxia, or gummatous destruction of your vital parts." Why should we not demand the same regulations for these, the most dangerous of infectious diseases as for small pox, scarlet fever, measles, etc.? The mortality is higher.

We will now give our attention to personal



prophylaxis. In this we come nearer reaching the goal of our efforts than from all other methods. Personal prophylaxis has made great advances in the last few years and has proven of unquestionable value. In circumcision, the danger of venereal infection has been reduced as proven by the records which show that Jews suffer from venereal diseases less than others. This operation is to be recommended in early infancy, but under more aseptic conditions than the Jews' method which, unfortunately, is one source of venereal disease in that race. The use of the condom as a preventative is worthy of a more general use. As mercury is so very antagonistic to syphilis, Buchman advises the use of unguentum hydrargyri as an application before coitus, thus acting as an antiseptic film.

In gonorrhea, the nitrate of silver acts as the antidote and, although not as specific as the mercury, has given good results. It was used as an injection before and after coitus, but owing to its irritating qualities was replaced by the silver salts, protargol and argyrol being the most popular. Protargol in a 20% solution will destroy the gonococcus in five seconds, but as this is too strong to use in the urethra, Frank recommends the instillation of a 10% solution in glycerine. Argyrol, being entirely free from any irritating qualities and much higher in per cent of silver, has of late replaced all other silver salts and given excellent results, being used in as high as 40% solution. This, in the hands of a patient or individual with a box of mercurial ointment, will prevent many a person from venereal infection and ought to be recommended, as it is perfectly safe in the hands of everyone. If every prostitute was supplied with these preventatives, we could surely get nearer the source of danger and confine it to its present limits.

The objection to this procedure is, Is it wise to give this instruction and place these preventatives at his disposal or should he be allowed to grow up in ignorance and sooner or later meet with these pitfalls? I say, Instruct him first, then if he chooses, he does so with some knowledge of his acts, and has only himself to blame; otherwise, he acts blindly and is to be pitied.

In concluding, I would emphasize these points.

First: Education of prostitutes as to the care of themselves and as to the prevention of disease.

Second: More care exercised by physicians in treating their venereal cases and their discharge only when cure has been effected.

Third: Proper teaching of physiology in high schools and by physicians.

Fourth: Obligatory instruction of venereology in higher institutions and in prisons, industrial schools, and other public institutions.

Fifth: Distribution of literature on sexual hygiene, dangers of venereal diseases and preventative precautions for same, written by good authority and distributed by the State Board of Health.

Sixth: Suppression of advertising sheets and other printed matter poisoning to the mind of the youth.

Seventh: Opening of hospitals and dispensaries for the care and treatment of venereal diseases in their early stages.

Eighth: Instruction for individual prophylaxis. a. Circumcision. b. Use of the condom. c. Medicinal measures.

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#### KALAMAZOO ACADEMY OF MEDICINE.

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At the April meeting of the Academy, the following paper was read by **Dr. Edward J. Bernstein**:

#### EAR CONDITIONS OF INTEREST TO THE FAMILY DOCTOR

The time has long since past when the dictum is true, that "Those ear troubles which can not be cured by an ear syringe or a politzer air bag, are practically hopeless." Fortunately for Otology this reproach no longer stares us in the face. While both these instruments are very useful, nay even indispensable to us, their indiscriminate use is often harmful. Especially so, is this the case of the latter.

The proper appreciation of the very serious obligation which the family doctor daily assumes in his conflict with children's diseases, more particularly in the acute febrile disorders, and the helpfulness of the modern otologist, have done much, and will do more, to reduce the number of deaf persons. I wonder if as many men as ought, appreciate the fact that blindness—dreadful as is that affliction—causes less misery in the world than ear troubles! I venture to say that more people end their existence, many times over on account of their helplessness from this, than from loss of sight. We all know the proverbial cheeriness of the blind and the moroseness of the deaf. We aurists believe that with the proper co-operation of the family doctor, we can do almost as much to eradicate deafness as we have done to reduce blindness from ophthalmia neonatorum.



The readiness with which the ear can be examined and the necessity for such, should hardly call for a word, were we not all aware how easy it is to neglect things in the rush of practice and the disinclination to incur the ill will of the sick child by annoying it, when it is already fretful and cross. This, on the one hand and the interference of the well intentioned, but meddlesome neighbor on the other, often prevent one from doing his full duty. We who have had experience in general practice, can appreciate this fully.

A word as to the method of examination of the child's ear. Whereas in the adult, we pull the auricle upward, outward and forward, in order to see the drum, this would but serve to close the canal more fully in the child; it is therefore necessary to pull the auricle downward and outward. Just as necessary as is the regular examination of the urine, so is the routine inspection of the drum in every case of measles, scarlet fever, diphtheria, influenza and whooping cough, even though there be no complaint of pain in the ears. For while such pain does often proclaim ear complication, the number of such instances is very small, as compared with the number in which the first evidence is the appearance of discharge on the pillow. Often, in young children, even when the ear is looked after, the actual state of things may be misinterpreted by the inexperienced, as the drum may be white and prominent and not show the intense congestion going on. This (whiteness) is due to the great pressure in the tympanic cavity, causing an exfoliation of the epidermis of the membrane. A cotton tipped probe very gently wiped over its surface will brush this exfoliated epithelium away and show the reddened bulging condition beneath (McKernon).

When a bulging ear drum is found, with or without great pain, it is little short of criminal carelessness to permit the little patient to undergo these terrible tortures more than twelve or eighteen hours, in the hope that they will subside or burst spontaneously. If any one of us had to undergo such tortures *once* he would readily accede to this proposition. To hail spontaneous rupture, after days of agony, with the acclaim, "Well, it was lucky that it burst outward and not inward, for if it had the child would have died of meningitis" is worthy of the middle ages. Buerkner, testing the claim that myringotomy was not necessary in most cases, determined to try fifty cases, but after he had witnessed the agony entailed in 30 or 40, had not the heart to continue his experiment. When nature came to the relief of pain, she did it imperfectly as

often as otherwise. The opening was made at the top, in the *membrana flaccida* or elsewhere, and usually it was a pin hole, which but hindered free drainage and tended to render the condition chronic, with the subsequent loss of hearing as an assured thing and the possibility—not very remote either—of necrosis of bone or the formation of masses of cholesteatoma, which latter, if given time enough, will erode the bone till communication with the cranial cavity is established.

It has been abundantly proved by actual trial, that when the drum is opened artificially, the patients get well so much earlier than when left to nature. Nearly half of the incised cases were well in five days and within the first twenty days the results stood 90.5% for the incised and 43.5% for the spontaneous. In the former but 3% of functional disturbances and in the latter 12% were observed. If it is not easy to get an aurist to do this little operation for you, I am sure much the lesser evil would be, for you to take a large hagedorn needle, whose tip alone is exposed to within  $\frac{1}{8}$  of an inch and carry it down along the posterior and lower wall till you hear a click—which tells you that you have perforated the tympanum. This is to be followed by warm douches of 1-5000 bichloride. I realize that this teaching may be construed by some as pernicious, but I believe it is infinitely less evil, than permitting nature to do the act any way. It goes without saying that the proper way is to do it under full illumination and with a properly constructed knife.

In any acute febrile disorder, when in the ordinary course of events, the temperature remains out of proportion to the condition or in the event of its subsidence, it undergoes a recrudescence, do not forget to watch the ears, for you will more than likely find the solution of the trouble there. The diseases in which this may supervene are the exanthemata, gastro-intestinal troubles, typhoid fever and la grippe.

Those individuals, who are subject to frequent attacks of tonsillitis and especially those children who sleep with their mouths open and snore a great deal at night and suffer from bed-wetting—which as you well know are the concomitants of adenoids—are especially prone to ear troubles, sooner or later—usually sooner. Needless to say neither adenoids nor hypertrophied tonsils disappear if left to themselves. Nothing short of a total eradication—root and branch—of these structures can be tolerated. Inasmuch as it is almost the rule to have some ear complication in most cases of measles and scarlet fever, and in

consequence of improper handling of these, deafness often results and inasmuch as deaf mutism is directly traceable to scarlet fever in various percentages from 15% in Italy to 42.6% in Saxony, I shall say a few words with especial reference to the ear complications of these diseases.

The otitis media of measles is usually suppurative and is ushered in with great pain, lasting till perforation occurs to relieve the patient, while in scarlet fever it often creeps on insidiously, so that the first intimation of ear trouble is the evidence of the discharge in the external canal. As a prophylactic measure, I deem it good practice to daily wash out the nose with warm saline solution—and let me add, that no proprietary article is one whit better than a simple solution of a pinch each, of bicarb. soda and table salt in a half cup of warm water. All other ingredients are worthless and only subject your patient to a needless expense, with no corresponding value. After washing out the nose as mentioned, the patient gently blows it, being careful not to hold either side shut—so as not to carry secretions into the eustachian tube. I have the attendant drop a few drops of a ½% sol. iodine or a ½% sol. nitrate of silver into the nares *t. i. d.*, while the child is lying on its back.

The otitis of scarlet fever occurs in three forms, the acute catarrhal, the acute suppurative, and scarlatina-diphtheritic form. Much of the nature of the otitis will be due to type of epidemic, though it is without doubt that children with tough skin, with no adenoids or large tonsils, have less severe complications than those with thin skin and with such hindrances.

The acute catarrhal form is likely to come on in prodromal stage, at the time of, or shortly after, the appearance of the rash. It is accompanied with a sense of pressure and fullness, throbbing, and at times, some pain and rapid depreciation of the sense of hearing. This latter gradually improves after the drum is opened and is most often entirely restored during convalescence. It seems that the secretions which pass up through the tube, act as a curative serum and that the use of the syringe is especially to be avoided. It is much better to simply wipe out the canal with absorbent cotton. Until all throat symptoms have entirely cleared up, it is also most dangerous to use the politzer air bag, but after the second week when all throat symptoms have cleared up, then the cautious use of the air bag will clear up any deafness.

The suppurative form is ushered in with most

intense earache and heightened fever. Opening the drum promptly relieves all the symptoms, but should pain and fever not subside, we may be sure that the bone is more seriously involved, the soft parts are then seen to be swollen, the child assumes the characteristic attitude of wry neck and we often see symptoms which look like cerebral involvement—vomiting, convulsions, etc.—and the diagnosis of meningitis is incorrectly made. I should like to here remind you that these symptoms are apt to occur before the eruption and disappear as soon as the rash is well developed. It is important to constantly bear this in mind. It has a distinct bearing on the prognosis and treatment. For, in treating such a case, when one has to deal with faucial angina and consecutive ear suppuration with free flow of pus and these cerebral (?) symptoms intervene, one need not thereupon feel that meningitis has set in.

The course of the suppuration depends, in a large measure, upon the skill and care of the medical attendant. Prompt and thorough opening of drum gives not alone immediate relief, but also the best chance for restitution to normal. If the pyogenic process seems apt to get the upper hand, one must seek to annul such effect by killing off the pathogenic organisms in the tympanic cavity. The canal is syringed out with 1-5000 bichlorid, or what I believe to be better—1-400 iodine solution two or three times a day. After wiping out the canal with sterile cotton, very gentle politization, again wiping whatever secretions which well up from the tympanum and then a few drops of 1% solution of iodine in dilute alcohol are poured into the canal while the head is turned in the opposite direction, then pressing upon the tragus, get the patient to swallow when the fluid will enter the tympanic cavity and trickle down the eustachian tube. Treatment should be kept up till the secretions lose their purulent character. Danger to hearing and involvement of the mastoid are reduced to a minimum.

In the more violent form of suppuration, the so called scarlatinal-diphtheritic form, we have the most awful of ear conditions, for here we have not only mastoiditis in its worst form, but deaf-mutism and death intervene in the most incredibly short time. Strange to say the process does not begin with such fulminating symptoms as in the preceding variety, but creeps on insidiously. In from 36 to 48 hours the tympanum becomes macerated and the secretions foetid from necrosis of the deeper tissues; the ossicles are exfoliated by fatty degeneration and thrombo arteritis. Fortunately this picture is not common, but when it does occur it is perfectly appalling to find the



hearing vanish in a few short hours, if the process involve the labyrinth. Often this latter structure is involved and hearing abolished just as completely, without any appearance of suppuration. The trouble is carried either through the lymph channels or by the blood current directly into the labyrinth.

As for treatment, inasmuch as this form is a mixed infection, the prompt use of diphtheria antitoxin and the streptococcic serum is urgently indicated. This is to be combined with the aforementioned local treatment. For the labyrinthine involvement, the subcutaneous injection of muriate of pilocarpine, in doses ranging from 0.005-0.02, two or three times daily, provided the heart permits, should be used.

As to chronic suppurations a word—here again the dictum so often quoted that “it is a good thing for an ear to discharge” is veriest acknowledgment of either ignorance or laziness on the part of the doctor. Doubtless you may smile at my positiveness or that I should recall these fallacies to your attention, but it has not been so many years that such was the common advice given by doctors.

In truth, every running ear is a very sword of Damocles hanging over the head of the patient. No one can tell at what moment, especially in those exposed to cold weather, the storm may burst and a serious involvement of the meninges occur. We know only too well the gravity of this condition and yet while I tell you this, I am sure there are some among you who are mentally running over the list of those old men and women, who have been carrying a discharging ear almost from childhood with apparently no discomfort and relative immunity. This is true enough and is due to the fact that when otitis media occurs in early childhood, nature attempts to ward off danger by a process of sclerosing the mastoid, thus shutting off the cranial cavity from the tympanum. That one is on pretty thin ice who trusts to this, is only too apparent upon closer investigation. The only safe thing for these cases which resist careful and systematic treatment is the radical mastoid operation and this is demanded in every case, especially when a tendency to necrosis or polypus presents.

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#### MONTCALM.

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The meeting of the Montcalm County Medical Society was held in Greenville, April 12th. There was a larger attendance than usual and much in-

terest was taken in the papers read which elicited earnest discussions. Two new members were added to our roll of membership.

The next meeting will be held in Greenville, in October, in conjunction with the Eleventh Councilor District meeting.

H. L. BOWER, Sec'y.

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#### OTTAWA.

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At the last meeting of the Ottawa County Medical Society the following resolutions were adopted:

Holland, Mich., May 4, 1906.

Whereas, The American Medical Association, through its Council on Pharmacy and Chemistry, is engaged in the work of bringing to the attention of the Medical Profession the composition of the various nostrums and proprietary medicines which are on the market and advertised extravagantly and fraudulently to the profession; and

Whereas, The interests concerned in the manufacture and sale of these nostrums are spreading literature throughout the country and are doing everything in their power to defeat the work of the Council on Pharmacy and Chemistry; and

Whereas, The American Medical Association, through the editors of the “Councilors’ Bulletin,” has asked for an expression of the attitude of the different county societies, the component parts of the A. M. A.; therefore, be it

Resolved, That the Ottawa County Medical Society of the State of Michigan, hereby expresses its approval of the work that has already been done in this regard and agrees to help in every local way possible this educational campaign; and further

Resolved, That the members of this Society shall refrain from prescribing any of the nostrums which have been analyzed and rejected by the Council, and that they shall seek to profit by the articles published in the Journal of The American Medical Association under the head of “The Pharmacopeia and the Physician”; and, further

Resolved, That the Society extends its thanks and earnest commendations to “*Collier's Weekly*” and “*The Ladies' Home Journal*” in their campaign against “The Great American Fraud,” and promises its support in their work in this direction; and further

Resolved, That copies of these resolutions be sent to the “Journal of the American Medical Association,” “The Journal of the Michigan



State Medical Society," "Collier's Weekly" and "The Ladies' Home Journal."

B. B. GODFREY, M. D.,  
E. D. KREMERS, M. D.,  
Committee.

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#### SAGINAW.

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At the regular quarterly meeting of the Saginaw County Medical Society, held on May 1st, the following program was presented:

"Diseases of the Heart," Dr. W. J. O'Reilly;  
"The Treatment of Pneumonia," Dr. Arthur Grigg.

It was voted that the Society meet monthly instead of quarterly.

P. S. WINDHAM, Sec'y.

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#### WAYNE.

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General Meeting, March 5, 1906. Mr. Hugo Lieber, New York, delivered an address: "Radium and Its Emanations—with Demonstrations."

The theory that radium itself discharges three kinds of rays, which have been called the alpha, beta and gamma rays, was soon found to be incorrect by Professor Ernest Rutherford, of McGill University, Montreal, who discovered that radium itself primarily discharges only the alpha rays. It is a well-known fact that the emanations precipitate upon all matters with which they come in contact a radio-active deposit, thereby creating what is called radio-activity. This radio-active deposit decomposes very readily, losing almost its total activity within twenty-four hours. The radio-active deposit consists of three radio-active products, which, for convenience, have been called by Rutherford radium A, B and C.

When radium A, B and C decompose, there always remains a slight radio-active residue. The activity of this residue grows continually, discharging as well the alpha as also the beta rays. This radio-active residue consists again of three radio-active products which have been called radium D, E, and F. D is supposed to be non-radiating, therefore not radioactive, a product which decomposes very slowly (one-half in about forty years), and the decomposition of D produces E, which discharges only beta rays and which decomposes within about six days to one-half, whereby F is created. F discharges only

alpha rays. The alpha activity of F grows continually and achieves its greatest activity in about two or three years. F decomposes to one-half in 143 days.

D, E and F are soluble in acids, and if rods or discs of bismuth are dipped in this solution, they become very powerfully radio-active. The activity of these rods and discs must be attributed mainly to a radium F deposit and therefore is to be ascribed mainly to the alpha rays. As the same data have been found to apply to the radio-tellurium of Marckwald, there is hardly any doubt that this radio-tellurium and radium F are identical. F itself is probably 3,200 times as radio-active as the same quantity of pure radium. The difference as to the subsequent discharge of radiations and emanations by radium, which is of such great importance to the physicists, seems to be of minor practical importance to the physician upon superficial examination. However, this is not the case. Formerly, radium was used or applied only in containers consisting of glass, aluminum, hard rubber, etc. Now it is a well-established fact that the emanations as well as the alpha rays possess, practically speaking, no penetrating power, as they are not even able to penetrate tissue paper, the beta rays are of considerable penetrating power and the gamma rays of enormous penetrating power. Therefore, if we apply radium in the containers used up to a short time ago, we can avail ourselves solely of the beta and gamma rays as the alpha rays and emanations are unable to penetrate the walls of the container. As thereby we are losing more than 85% of all the radiations and as we are unable to utilize the emanations in that form, it had been my desire to obtain or prepare radium in such form that we have access to the alpha rays and the emanations as well as to the beta and gamma rays without running the risk of losing or damaging the radium itself.

After long experiments, I succeeded in producing what has been termed "radium coatings" in the following manner:

I dissolve radium in a proper solvent, which solvent must be changed in accordance with the matter to be coated. In this solvent I dip rods, discs, instruments or any other matter which is to be used for a given purpose. I use preferably celluloid, hard rubber, etc. The solvent is so composed as to somewhat soften the surface of the instrument to be coated. If I therefore withdraw the instrument from the solution, same will have adhering to it, as far as dipped, some of the radium solution and when the solvent of this solution is evaporated, there will remain an

exceedingly thin film of radium producing thereby almost all surface action. However, in this form it would not have been possible to use the radium, as same would have been readily subject to mechanical destruction or dissolution when brought in contact with the fluids of the body, etc.; therefore, it was necessary to surround this radium film with a protective coating. This, however, was no easy matter for if a protective coating was made too strong, we would have had the same disadvantage as in the radium tube, that is, inability to use the alpha rays and emanations, therefore the coating had to be prepared so as to be strong enough to withstand ordinary use such as friction, etc., and to protect the underlying radium film from destruction by fluids, etc. On the other hand, the protective coating had to be thin enough to permit the alpha rays as well as the emanations, which will not even penetrate tissue paper, to penetrate. I finally succeeded in solving this problem by providing the radium film with another film of collodion, which film is prepared so as to be tough enough to withstand ordinary usage, and which, on the other hand, is thin enough to permit the alpha rays and emanations to penetrate.

If we now insert an instrument, rod, disc, or whatever the case may be, just coated with radium and suitably protected, into a wound, etc., the alpha rays as well as the beta and gamma rays can act upon this and furthermore the emanations will penetrate and provide the walls of the wound with which they come in contact with the radio-active deposit as described before, which in turn will undergo the various changes, all as indicated before.

That the alpha rays are able to penetrate the coatings may be readily proved by holding a so-coated rod or disc, etc., upon a zinc sulphide (sidotblende) screen. If you then observe the so-produced fluorescence upon the screen with a good magnifying glass, you will see a large quantity of scintillations, which has been so beautifully demonstrated by the spinthariscopes of Sir Crookes. These scintillations are produced by the bombardment or striking of the alpha particles upon the zinc sulphide.

That the emanations penetrate the coating can readily be proved by either placing such coated rods, etc., in a glass tube and then blowing air over same but still better by blowing air through a tube which has been coated on its inside with radium and protected with a suitable coating, and then allowing this air which passes through the tube to strike the electroscope. It is a well-known fact that the gaseous emanations will fol-

low the air current, and as the emanations as well as radiations ionize the air, that is, make the air a good conductor for electricity, this air, which has passed through the tube and is laden with emanations, will discharge the electroscope.

AUTHOR'S ABSTRACT.

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Meeting of Medical Section, March 12, 1906.  
Dr. B. R. Shurly presented the paper: "The Treatment of Pre-tuberculous Conditions, with a Consideration of the Hypodermic Method in Associated Anaemia."

The pretubercular stage of phthisis is in the vast majority of cases nothing more than an unrecognized tuberculosis, and there is no tuberculosis without tubercle bacilli. The signs which indicate the probable approach of demonstrable tuberculosis are (1) progressive loss of weight with asthenia; the ratio of height in feet and decimal fraction to weight in pounds is normally 26 for men, and 23 for women; 21 is abnormally thin. (2) The average between the circumferences of the chest (men, at level of nipples, women, at ensiform) upon forced inspiration and upon forced expiration; this constitutes the so-called thoracic perimeter, and should never be less than half the height, (3) Vital capacity, which for men should not be less than 3 cu. in. for each inch of height, and 2.6 cu. in. for women. (4) Lymphatism, or general hypertrophy of lymphoid tissue, as the tonsils, lymphatic nodes, etc. (5) Persistent indigestion. (6) Chloro-anaemia. (7) Lowered pressure and rapid pulse as studied by pressure apparatus.

This condition of lowered resistance has been successfully combatted by daily hypodermic injection, deep into the muscles of buttock or back, of .05 to .1 of a grain of the green ammonio-citrate of iron, and .001 to .002 of a grain of the arseniate of soda, according to indications. The treatment should be started with the smaller doses. The medication is dispensed in aseptic individual doses contained in glass pearls, ready to be transferred into the syringe.

"In conclusion, it is evident that no one or two signs can be relied upon as conclusive proof of an approaching phthisis. Yet taken altogether, we are given enough danger signals to warn us. Active measures may be enforced at this stage with the best results. If the strenuous fight against the ravages of tuberculosis was advanced to the pretuberculous stage, the stage of lowered resistance, consumption would not attain its high mortality. Hypodermic medication with iron, ar-



senic, hypophosphites, and strychnine offers a prompt and powerful reconstructive adjunct to the "necessary pure air, good food, and sensible hygiene."

**Dr. W. S. Anderson:** Early recognition of commencing tuberculosis will make treatment correspondingly more effective. Hypodermic medication is as much more definite than medication per orem as surgery is more definite than medicine. The tuberculin reaction would perhaps be a help in making early diagnosis.

**Dr. C. D. Aaron:** All forms of iron introduced as medicine into the stomach are changed into the chloride; it is not absorbed, but protects the natural iron in combination with nucleo-albumin from the action of the sulphates. One advantage of the hyperdermic method is seeing the patient every day, and being thus enabled to adapt the day's treatment to the day's need.

**Dr. E. L. Shurly:** Recommended hypodermic medication as definite, prompt, and effectual. Copper sulphate, phenol, and iodine can be used hypodermically in indicated cases, with extraordinary results.

**Dr. W. M. Donald:** Has found the injections painful, and thought same results could be accomplished by oral medication. The difficulty with radiographs of the chest for diagnostic aid is the need for expert interpretation of the radiographs.

**Dr. J. W. Vaughan:** Inorganic iron introduced directly into the tissues, acts as a local poison, and is absorbed only after it has changed from its inorganic state, at the sacrifice of the adjacent cells.

**Dr. Shurly:** In reference to the difficulty with radiographs, the practical and safe use of any instrument of precision depends upon knowledge of, and familiarity with, the instrument in question. Hyperdermic method not painful when rightly used. Not expensive, even the Italian capsules costing only seven cents apiece. No abscess in over 500 injections.

General Meeting, March 19, 1906. **Dr. Paul Thorndike,** Boston, presented the paper: *The Surgery of the Prostate.*"

Meeting of Surgical Section, March 26, 1906. **Dr. P. D. White** presented, with demonstration, a paper: *"A Modified Phorometer."*

The instrument presents no original tests but a combination of many in compact, convenient, and practical form. Was made for personal use, and as a time saver.

Discussion of good points and limitations of, Stevens, Wilson, and Savage phorometers, and "Latest Optimeter."

While using instrument: Vision of one eye undisturbed, special head rest to keep eyes close to lenses, use of trial frame largely obviated, adjustment accomplished by special bracket, instrument levelled by two screws and spirit level.

From behind forward, the instrument presents—two fixed and two revolving cells, two swinging revolving cells, two instantly movable prism holders (pupillary adjustment for all the above), two rotary prisms in special cells, giving total of 10 and 30 degrees respectively. By means of rack and pinion arrangement, either rotary may be moved before either eye and as far back as back uprights. This is the distinctive feature.

Three positions of instrument enable one to tell the balance (asthenic or sthenic) of the recti and obliques and duction power of all these muscles. (Author's abstract.)

**Dr. G. H. McFall** presented a paper: *"Neuralgia Due to Sinus Disease."* The author referred to the large proportion of persistent cranial neuralgias and headaches caused by inflammation of one or another of the accessory sinuses of the nose. The pain is a pressure symptom, and the treatment is drainage, either by removal of obstruction in the way of natural drainage, as a deflected septum or an hypertrophied turbinate, or by artificial opening into the sinus. Radiography and transillumination are important aids in differential diagnosis.

**Dr. B. R. Shurly:** Recommends in acute cases the favoring of drainage by reduction of congestion of middle turbinate with cocaine and adrenalin. In subacute and chronic cases, remove anterior end of turbinate. Examination of the wash water after puncture will determine the nature of the inflammation.

**Dr. W. S. Anderson:** In rare instances, nasal obstruction can result from only mucopus in the antrum. The frontal sinus is so variable that operation upon it from within the nose is dangerous. Recent development of radiography of the sinus will make this operation less uncertain.

**Dr. P. M. Hickey:** "Neuralgia" usually covers a failure of diagnosis. Pain in a nerve is generally caused by some definite irritation. Radiography as applied to sinus disease, though still in its infancy, gives accurate information regarding the size and shape of the frontal sinus, as well as the thickness of its walls.

**Dr. P. D. White:** Spoke of the liability to dryness of the nose after resection of the turbinate.



**Dr. C. S. Oakman:** The rather high mortality of operations on the frontal sinuses (7 to 10 per cent) should induce caution in advising radical operation.

**Dr. J. E. Gleason:** Much of the danger in operating on the sinuses can be avoided by entirely omitting packing. Many cases of chronic sinusitis give no pain; atrophy is often the prominent indication.

**Dr. Emil Amberg** read a paper: "Ear Affections and Mental Disturbances."

After citing a number of cases, some of them his own, the writer divides the relations of ear affections to mental disturbances, into five classes. They are based, in his opinion, on: (1) Hearing sensation. (2) Exhaustion, local irritation and intoxication. (3) A pathologic mental predisposition. (4) No causative or accessory relation. (5) Accumulation of cerumen and foreign bodies. He reaches the following conclusions: 1. The ear participates in the production of mental disturbances, directly and indirectly. 2. As an organ of sense, its functional disturbance may disharmonize the normal state of thinking. 3. Mental disturbance can be brought about in two ways: By causing hallucinations or illusions, the influence of which is more or less strong according to the predisposition of the afflicted individual. 4. Entirely different from these disturbances are those in which the ear and its surrounding parts are simply the place in which a toxemia, for example, is primarily created, or in which an abscess engages the vitality of the body. 5. Both conditions (3 and 4), while entirely different from each other, clinically and pathologically, can produce mental disturbance or aggravate pre-existing mentally abnormal conditions. 6. It is very probable that, also without a predisposition, a mental disturbance can be created, if, e. g., the annoying subjective noises create a state of exhaustion or neurasthenia in the patient. 7. These conditions are of great import from a forensic point of view and must be considered in declaration of witnesses. 8. We are confronted by the important question whether the consent to an operation is required of an adult patient whose mental ability is temporarily interfered with and who is unable to judge his condition; also whether the consent of the relatives is necessary in such a case. 9. The hearing organs of inmates of asylums should be examined. 10. Patients suffering from mental disturbances who exhibit symptoms on the part of the hearing organ, should be examined not only for pathologic condition of the ear but also of other organs, e. g. of the kidneys, on account

of the fact that the disturbance in the ear, although in itself a nerve center, may be only a reflex disturbance. 11. The benefit of surgical interference in ear affections should be bestowed upon the insane in need of it. (Author's abstract.)

**Dr. Minta P. Kemp:** Hallucinations of hearing are most distressing to insane patients.

W. E. BLODGETT, M. D.

## Michigan Personals

Dr. C. G. Jennings has been elected President of the Detroit Board of Health.

Dr. W. T. Parker, of Fowlerville, after spending a year in Europe, has returned to his home.

Dr. W. J. Herrington, of Bad Axe, has been seriously ill from septicemia.

Dr. G. W. Orr, Lake Linden, has been appointed health officer of the township.

Dr. Harry Miller has moved from Cambria to Hillsville, Mich.

Dr. W. M. Wemp has moved from Otter Lake to Oxford, Mich.

Dr. J. J. Day, of Lake Odessa, has removed to Alma.

Dr. James Eakins has been elected city physician of Alpena.

Dr. E. K. Herdman has been re-elected city physician of Ann Arbor.

Dr. H. R. Niles has been appointed steward of the Michigan School for the Deaf at Flint.

Dr. G. P. Sackrider, of Henderson, and Miss Nora Blackmore, of Leslie, were married April 18th.

Dr. G. W. Jones has been elected health officer of Imlay City.

Dr. F. W. Stewart has been made health officer and Dr. de Somoskeoy, city physician of Coldwater.

During Dr. C. B. G. de Nacrede's absence in Europe, Dr. W. H. Hutchings, formerly assistant in surgery at Ann Arbor, but now of Detroit, will be Lecturer on Surgery at the Dartmouth Medical School.

Dr. E. R. Campbell and Miss Margaret Pitt Durant, both of Flint, were married April 18th.

## Deaths

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Dr. O. F. Burroughs, a graduate of the State University in 1869, a practitioner in Galesburg for nearly 50 years, died at his home April 14, aged 76 years.

Dr. E. De Spelder, Second Vice-President of the Ottawa County Society, died of meningitis at his home in Zeeland, April 11th. The deceased was a graduate of the University of Michigan and was held in high esteem by his colleagues in Western Michigan. The members of the Ottawa County Medical Society attended the funeral in a body.

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A hematoma may be produced in the calf muscles by direct or indirect violence that the patient may pay little attention to at the time or even fail to recall.

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## SURGICAL SUGGESTIONS.

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Swelling of the leg, associated with febrile disturbances, may be produced by hematogenous infection of a hematoma of the calf muscles. Such a condition may somewhat simulate osteomyelitis or other serious condition. It may be differentiated, however, by the location of the greatest tenderness and swelling and by a careful inquiry into the history. If no distinct traumatism is recalled the condition of the patient's arteries may nevertheless suggest the possibility of the occurrence of such a hematoma.

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Persistent pains in the leg may be due to obliterating endarteritis. This occurs occasionally even in young men and often goes on the production of gangrene. Both syphilis and excessive smoking are suspected as etiological factors.

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Flat-foot is another cause of pains in the leg or thigh.

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Wet dressings, especially the very useful Burrow's solution of aluminum acetate, when applied to the hand or foot, usually cause maceration and whitening of the skin, which is apt to alarm the patient. The addition to the solution of one-fourth its bulk of glycerin or alcohol, will obviate this unsightly maceration.

If within a week or two after the performance of gastrostomy the drainage tube should be expelled from the fistula, do not entrust its re-introduction to inexperienced hands. It has sometimes happened that the tube has been pushed into the peritoneal cavity, instead of into the stomach.

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Bandage knives cut best when they have a "saw edge," which is easily secured by sharpening them on a window sill or other rough stone.

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Carcinoma of the cervix may remain hidden in the lumen of the cervical canal, which is then eroded and forms an irregular elliptical cavity. While the external os is closed suspicion of the serious condition present will be attracted by the foul or bloody discharge.

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When the openings of the Bartholinian glands appear as two sharply defined red spots, an antecedent inflammation may be diagnosed with certainty, and in a great majority of instances a latent gonorrhea is present.

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In cases of hematocolpos and hematometra it is essential to precede all interference by a careful rectal examination in order to determine whether the tubes are distended or not. If hematosalpinx exists a laparotomy and salpingectomy must precede the vaginal operation, otherwise a severe peritonitis may be set up by a reflex discharge of infective secretion from the tubes.

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No operation for sterility in the female should be performed without first excluding sterility on the husband's part.

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Do not be too hasty in resecting a strangulated loop of intestine. It is remarkable how frequently such loops become viable after long continued applications of hot saline solution.

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If a peculiar looking mass is found at the inner side of the ring in the course of an operation for inguinal hernia, do not incise or dissect it before convincing yourself that it is not the bladder.

All cases of hernia in which there is a history of frequent urination should lead one to the suspicion that the hernial sac contains part of the bladder.—*Am. Jour. Surg.*

## Progress of Medical Science

### MEDICINE.

Conducted by

H. S. OLNEY, M. D.

**The Relationship Between Heart and Gastro-Intestinal Disturbances.**—SCHMIDT directs attention to the fact that apparent gastro-intestinal trouble is not infrequently an indication of faulty circulation resulting from weakened cardiac activity. Patients consult the physician on account of stomach trouble, complaining of painful sensations in the region of the stomach and intestines, gaseous eructations and the passage of a large amount of flatus. On examination the only objective symptom to be observed is a marked distention of the stomach and small intestines with gas. The stasis of the venous blood in the vessels of the stomach and of the intestines resulting from the weakened cardiac action leads to a decrease in the absorption of gas from the intestinal canal through the blood and lymph vessels. The large amount of gas contained within the gastro-intestinal tract is not due to an overproduction as a result of intestinal putrefaction but results from a decrease in the absorption of the gases normally present. Again wherever we have prolonged stasis and consequent engorgement of mucous membranes with blood we invariably find an associated catarrhal condition. Thus in insufficiency of the heart action with venous stasis in the vessels of the stomach and intestines, the development of a more or less general gastro-enteritis will ultimately take place. The symptoms arising on the part of the heart as a result of primary gastric disturbance have been divided into (1) Tachycardia, (2) Pseudo angina pectoris and (3) the so called dyspeptic asthma. The author claims that no sharp line of differentiation can be drawn between these various conditions inasmuch as attacks of dyspeptic asthma and anginal pain may replace each other in the same individual. The cause of the development of the associated heart symptoms is undoubtedly reflex irritation. These reflex disturbances of the heart occurring in connection with gastro-intestinal conditions never develop unless the heart itself is affected with some functional or organic disease. Reflex disturbances from the gastro-intestinal tract do not occur in normal hearts. The prognosis as to the ultimate outcome is favorable in the case of reflex disturbances associated with cardiac neuroses. When, however, the heart trouble is organic, a gastro-intestinal condition may, through reflex action, damage the capability of the heart beyond repair. —*Berliner klin. Wochensh.*, No. 14, 1906.

**The Significance of Premenstrual Elevations of Temperature.**—RIEBOLD studied the premenstrual temperature curve in 2,000 cases. He con-

siders as premenstrual fever those cases in which a rise of at least .5° C. over the maximum daily temperature occurred on one of the three days immediately preceding or on the first day of the menstrual period. Premenstrual fever was found (1) Accompanying the first or second period following convalescence from the acute infectious fevers. (2) In cases of recent recovery from acute tonsillitis and in cases of enlarged tonsils. (3) With diseased conditions of the genitalia, salpingitis, endometritis. (4) Accompanying dysmenorrhea and chronic constipation (autointoxication). (5) In diseases of the nervous system. (6) In tuberculosis. The temperature curve in normal women shows a distinct premenstrual rise followed by a decline during the menstrual period. However the premenstrual rise in normal individuals never rises above the normal maximum temperature. The explanation of the premenstrual rise in temperature is found in the fact that at this time there is a distinct increase in metabolic processes of the body. The increase in metabolism is evidenced not only by a rise in body temperature but also by a coincident increase in the frequency of the pulse, a rise in blood pressure, increase in the lung capacity and an increased output of urea.

Riebold studied 70 cases of pulmonary tuberculosis in 39 of which he was able to demonstrate the presence of premenstrual fever, which was present in initial cases as well as in those in which the lesions were well advanced. The premenstrual fever occurring in connection with pathologic conditions of the lungs is in the majority of cases an intoxication fever due to the absorption of toxic substances from old foci of disease. Occasionally the rise in temperature may indicate an active advance in the disease process occurring immediately before menstruation. Thus in tuberculous individuals high premenstrual fever not infrequently indicates a beginning pleurisy. Tuberculous pleurisy shows a tendency to develop shortly before or at the commencement of a period. The premenstrual fever which follows the infectious diseases is an indication that infectious foci still exist, usually situated within the lymphatic glands. Thus following acute rheumatic fever premenstrual fever is of significance as indicating that infectious foci still exist and relapses may occur. The premenstrual fever associated with constipation is explained as an intoxication fever resulting from the absorption of toxic material from the intestinal canal. RIEBOLD arrives at the following conclusion: Premenstrual fever is most frequently due to the absorption of toxic products from old or latent foci of disease. It may, however, indicate an active advance of the disease process. It is frequently, but by no means always present, in tuberculous individuals. Premenstrual fever is never observed in women who are in perfect health.—*Deutsche med. Wochensh.*, Nos. 11 and 12, 1906.



## SURGERY.

Conducted by

MAX BALLIN, M. D.

**Myelomatosis, Leukaemia and Hodgkin's Disease.**—Myelomatosis is the appearance of multiple myeloid tumors. These tumors originate from cells of the bone marrow, and do not show the same structure as the maternal tissue. They are always multiple in different bones, but form metastatic processes in internal organs, only exceptionally. Leukaemia is a disease of the blood characterized by increase of certain groups of leucocytes and increase of the lymph-adenoid tissues. These tumors of the lymphatic organs, glands, bone-marrow, etc., are of the same type as the maternal tissue, simple hyperplasias. The probable cause of leukaemia is a toxin—Lympho-spleen or Myelo-toxin (Flexner). According to the presence of lympho, spleno or myelotoxin, we get lymphatic, splenic or myeloid leukaemia. The hyperplasia of the lymphatic and myeloid organs in leukaemia are the consequence of compensation respectively and formation of antitoxin in these organs. Pseudoleukaemia shows the histologic picture of leukaemia with lymphocytosis. Hodgkin's disease is characterized by *inflammatory* hyperplastic formation in the lymphatic tissues. The original structure of the lymphatic organs is changed by large increase of round cells and formation of connective tissue. The blood does not show any changes in Hodgkin's disease.—R. Hoffmann, M. D., *Archiv. fuer klinische Chirurgie*.—Vol. 79, Part 8.

**Massage of the Heart Especially in Chloroform Syncope.**—The direct rhythmic massage of the heart has been done through three different incisions. (1) By the sterno-costal route; then an incision in the intercostal interspace; (2) by abdominal trans-diaphragmatic route, after opening the abdomen, the heart is reached directly through an incision in the diaphragm; (3) the abdominal sub-diaphragmatic route. The heart is compressed through a median laparotomy, without incising the diaphragm. The third route is the one most highly recommended and especially good when the heart collapse occurs during a laparotomy. The diaphragm is always relaxed during a syncope, so that the heart can be easily compressed by the hand being introduced into the abdomen, the other hand making counterpressure from the precordial region. The author has gathered from the literature the following cases: The sterno-costal was chosen sixteen times; in 12 cases the patient died, 3 were revived tem-

porarily, one permanently. The trans-diaphragmatic route—that is *with* incision of the diaphragm—was employed only 3 times, without any permanent result. The sub-diaphragmatic method (without opening the diaphragm) was chosen 5 times, with one death, one temporary revival and 3 permanent results. Direct electric irritation of the exposed heart is not only useless but even dangerous and should not be used. In case of heart-syncope the direct rhythmic compression of the heart about 30 or 40 times in a minute through an abdominal incision is to be recommended.—Chas. Lenormant, M. D.—*Revue de Chirurgie*, March, 1906.

**The Differential Leucocyte Count.**—The differential blood-count and its relation to the total leucocytosis is today the most valuable diagnostic and prognostic aid in acute surgical diseases that is furnished by any of the methods of blood examination. It is of value chiefly in indicating fairly consistently the existence of suppuration or gangrene, as evidenced by an increase of the polynuclear cells, disproportionately high as compared to the total leucocytosis. The greater the disproportion the surer are the findings, and in extreme disproportions the method has proved itself practically infallible. As the relative disproportion between the leucocytosis and the percentage of polynuclear cells is of so much more value than the findings based on a leucocyte count alone, this latter method should be abandoned in favor of the newer and more reliable procedure. The negative findings showing no relative increase or even an actual decrease of the proportion of the polynuclear cells while of less value, shows with rare exceptions the absence of the severer forms of inflammation. In its practical applications, the method is of more frequent value in the interpretation of the severity of the lesions of appendicitis and their sequelae.—Charles Langdon Gibson, M. D., *Annals of Surgery*, April, 1906.

**Arterial Anastomosis by Invagination.**—BROUGHAN reports a successful suture of the axillary artery after Murphy's invagination method. A negro, 39 years old, was stabbed in the axillary space. A large baggy mass filled the whole right axilla, the wound being blocked by a protruding clot. The right arm was cold and pulseless. The axillary vessels were exposed and both axillary vein and artery were found almost severed. The ends of the vein were ligated. The artery was temporarily compressed by digital pressure and sutured. The ends—after being entirely severed—were freed from the sheath for about half an inch. The proximal end of the artery was invaginated in the distal, by means of three fine silk-sutures. Five additional sutures fastened the overlapping edge of the distal part to the adventitia of the proximal end. Uneventful recovery. Radial pulse returned within 12 hours.—*Surgery, Gynecology and Obstetrics*, April, 1906.

## GYNECOLOGY AND OBSTETRICS.

Conducted by

REUBEN PETERSON, M. D.

**Uterine Myomata and Malignant Disease.—**

T. S. CULLEN, Baltimore, calls attention to the danger of incomplete examinations after hysteromyomectomy as regards the possible existence of malignant disease. He has been surprised to find how frequently myoma is associated with carcinoma in the large experience at the Johns Hopkins Hospital, and in 1903 he advised opening the uterus immediately on its removal to ascertain whether or not any chance carcinoma of the uterine body existed, and he now recommends not only the careful examination of the uterine cavity, but also of the myomatous nodules. As an illustration of this, he reports a case of supravaginal hysterectomy supposedly for simple interstitial and subperitoneal myomata. Two years later sudden collapse occurred due to hemorrhage from sarcoma of the cervical stump. Re-examination of the original tumor showed typical sarcomatous changes of the myoma. The patient died eight months after the progress of the growth had necessitated an operation for obstruction of the bowels. The case, he says, clearly indicates that physicians should examine carefully, not only the uterine cavity but also the myomata before the cervical stump is closed.—*J. A. M. A.*, March 10, 1906.

**Early Diagnosis and Treatment of Puerperal Septic Diseases.**—S. MARX declares that puerperal infection depends upon infection from without, gaining its entrance practically always by lesions in the vagino-uterine route. These, like infective areas in other parts of the body, should be discovered and attacked energetically and wisely. The writer has maintained for years that practically all sepsis arising after labor gains its entrance from the so-called puerperal ulcers, whether they be situated at the vaginal outlet, their most frequent site, or upon or within the cervix. Early recognition and treatment will cut short many a case of beginning sepsis that would otherwise develop into a dangerous and prolonged illness. All elevations of temperature, or an abnormally high pulse rate, with or without fever, in the period of the puerperium, should be considered with suspicion. Every case of this kind should be looked upon as one of sepsis, until the diagnosis can be absolutely made. A complete and thorough physical examination must always be made before the local one, except in those cases in which there is no question that sepsis is the one and only condition present. In the

case of evident ulcerative areas, which are limited to the lower genital tract, the interior of the uterus should under no condition be invaded by hand or instrument. Carbolic acid, in pure form, is the cauterant of choice because of its painlessness, its deep influence, and the ability to control its action with alcohol. In the case only of intra-uterine sapremia is the exploration for retained products of conception justified.—*Medical Record*, April 28, 1906.

**Intraligamentous Drainage for Non-Supporting Parametritis, With Description of Technique.**—GARRIGUES describes his method of operating as follows: After curetting the uterus, the cervix is drawn toward the healthy side, and a bullet forceps is inserted in the vagina to the side, and slightly posterior to the cervix, so as to put the vagina on the stretch. An incision, about three-fourths of an inch in length, is made through the vaginal wall, close to the uterus. The forefinger is inserted, and, keeping close to the uterus, is pushed well up between the layers of the ligament into the hard parametrium, and then outward, so as to open up the mass freely for drainage. Should the Fallopian tube be much swollen it is opened by means of a blunt forceps under the guidance of the index finger. A good-sized tube is introduced, either into the parametrium or into the tube, as the case may be, and the operation is complete. If no pus is present a small quantity of bloody serous fluid escapes. The writer has never had to use an artery forceps, and has had no deaths following this operation.—*Medical Record*, April 7, 1906.

**Vaginal Section in Relation to Puerperal Sepsis.**—PRICE advocates treating puerperal sepsis by walling off the uterus from the neighboring lymphatics through a posterior section by a liberal packing of iodoform gauze. The writer emphasizes as the essential point a liberal length of incision, as it is important to have abundant room for a goodly amount of gauze packing. During recent years he has operated in streptococcic infection, also in those clearly not streptococcic, but localized peritonitis with its plastic exudates around the adnexa. The results of this treatment have been most gratifying. Before the vaginal section is made, the uterus is irrigated with a mild antiseptic, preferably bichloride of mercury; a liberal application of equal parts of iodine and carbolic acid is made, and the uterine toilet is completed by a packing with iodoform gauze. By this treatment the pathogenic germs are destroyed by the liberation of iodine in their presence, and the many inflammatory lesions subsequent to puerperal sepsis if they have just begun are cut short, or if they have existed for some time, the condition is remedied.—*Medical Record*, March 10, 1906.



## PATHOLOGY AND BACTERIOLOGY

Conducted by

A. P. OHLMACHER, M. D.

**Experimental Studies Upon Fatal Burns.—**

Exactly how death is caused by excessive heat is not yet determined, although much attention has been directed to the subject. It is particularly difficult to find a satisfactory explanation of the mode by which fatal consequences result from extensive superficial burns or scalds of the skin. Laying aside the theory of shock and of neuropathic insult, the more recent views concern the changes wrought in the blood by the thermic exposure and two views are entertained. One holds that blood elements are disintegrated and destroyed in the burned area, and finding their way into the general blood stream impede circulation, induce thrombosis and finally cause death through mechanical interference. The other theory is that poisonous substances set free by the burned blood produce damage of organs and tissues, and death.

The problem has been recently attacked anew by EIKMAN and VAN HOOGENHUYZE, who used rabbits and resorted to various procedures, including the classic one of scalding the ears. Their conclusions are as follows:

1. By an extensive acute scalding of the skin or by a burning, where a part of the body has been exposed for a long time to the effects of heat, death can supervene, in consequence of paralysis of the heart, through overheating of the blood.

2. The changes in the blood, especially the great decrease in the number of red blood corpuscles and the disintegration of the same into particles with the appearance of hemaglobin in the urine, appear in some cases of burning without a fatal result; but are in other cases not demonstrable, although here death speedily occurs. They cannot, therefore, be regarded as the most frequent event or the most important cause of death.

3. Under the influence of heat the skin undergoes such a change that a substance appears therein, which, if received into the blood may cause death; the nature of this substance and how it acts are still undertermined. A total burning extending over a small surface, whereby carbonization sets in, is more easily borne than an extensive one less deep. This is explained by the reason that, in the first case, where the circulation is most impeded, the deleterious substance has less chance to escape.

4. Scalding of muscular tissue develops no such poisonous matter as appears in the skin.—*Virchow's Archiv.* Bd. 183, Heft. 3, 1906.

**The Antiendotoxin of Typhoid.**—As distinguished from the soluble specific bacterial poisons, or toxines as they are called, is the much larger class of poisonous substances closely incorporated with the bacterial cell and not set free without disintegration of the bacteria—the endotoxins. Of the first group two toxines are well known, those of diphtheria and tetanus. Poisons of the second or endotoxin class are characteristic of the typhoid bacillus, pest bacillus, streptococcus, pneumococcus, gonococcus, cholera spirillum, etc., in fact, for the majority of the pathogenic microbes. When susceptible animals are immunized by endotoxins antibacterial (bacteriolytic) bodies appear in their blood serum, but it has generally been held that no specific antiendotoxic properties manifest themselves. With this conclusion BESREDEKA disagrees on the basis of his more prolonged studies upon typhoid endotoxin. A horse which has for two years been subjected to intravenous injections of typhoid cultures, first killed and later living, has furnished the serum tested by this observer. It was found not only to possess the usual antibacterial properties (agglutinative, bacteriolytic) but further to neutralize the typhoidal endotoxin. To determine this antiendotoxic property guinea pigs were taken as test animals. With both dried typhoid cultures (dried endotoxin) and liquid endotoxin the minimal fatal intraperitoneal dose was obtained. Normal horse serum in sufficiently large amount neutralized twice the fatal dose, never more. On the other hand the serum of the immune horse neutralized 5 to 12 fatal doses of dried endotoxin and in much smaller amount than was employed of the normal serum. Against the liquid endotoxin the special serum proved even more active in its specific endotoxic action, nullifying 32 fatal doses. BESREDEKA does not think that he has by any means reached the limit of antiendotoxic production; and by more prolonged and more active immunization of the horse, and perhaps by a purification of the endotoxin, he hopes to achieve still more satisfactory results. A further suggestive point concerns the protective action of the antiendotoxic serum administered some hours before the test dose of endotoxin, and injected simultaneously; and the curative action of the serum when following after two hours, the injection of the fatal dose of typhoid poison.—*Annales de l'Institut Pasteur*, T. XX., No. 2, 1906.



## PHARMACOLOGY AND THERAPEUTICS.

Conducted by

C. W. EDMUNDS, M. D.

**Treatment of Exophthalmic Goitre.**—Dock used thyroid in the treatment of nine cases, giving 5 grains three times daily. One case showed a lessening in the size of the goitre while in the others practically no change was obtained. The pulse rate was decreased in 3 and increased in 2 cases. Diarrhea, nervousness, etc., were increased in 2 cases, while in the other 7 there was a subjective feeling of benefit.

Thyroidectin was used in 7 cases and did not seem to exert any influence over the course of the disease.

Iodothyrim and thymus extract, each used in 2 cases, gave no obvious effects. Suprarenal extract proved of no use.

Röntgen rays were used in 2 cases, with no other results than might have been obtained by any other method of treatment.

For purely symptomatic treatment, Dock advises rest, diet, care of stomach, intestines and skin, with special reference to symptoms from heat and nervous systems. For tachycardia, rest is of first importance, together with the use of the ice bag.

Strophanthus is usually better for this condition than digitalis, and it may be combined with strychnine.

For nervousness and sleeplessness, rest, fresh air, a cool bedroom and a comfortable bed are of great importance. Hypnotics and opiates are to be avoided if possible. For constipation sodium phosphate may be used, but is probably not better than cascara.—*Am. Medicine*, V. XI., p. 217.

**Aspiration in Acute Articular Rheumatism.**—CORDEIRO reports some of his results in the treatment of this disease by aspiration of the affected joints, whenever there is enough fluid present to warrant such treatment. He finds the pain and tenderness disappear at once, the temperature falling and the general course of the disease being shortened. In the cases treated by him in this manner the aspirated joint has never been re-attacked during the same or subsequent illnesses. Whether these good after-results will continue or not will take many more observations to decide.—*Am. Jour. Med. Sc.*, V. 13, p. 529.

**Pilocarpine in Chronic Renal Disease.**—WEST considers pilocarpine the most useful drug in the treatment of chronic renal disease. He has used it very largely and has never seen any

disadvantage follow its administration. On the contrary, nothing but good. Headache and restlessness, which are so common in the latest stages of the disease, are relieved more quickly and persistently than by any other means and threatened uremia stayed off. He gives it by the mouth, in 1/6 grain doses, two or three times daily, or subcutaneously in 1/12 grain doses. This amount does not produce profuse sweating or any unpleasant symptoms, merely a gentle action of the skin.—*Lancet*, Vol. 170, p. 1028, April 14, 1906.

**Poisoning Due to Belladonna Plasters.**—DOLAND reports three cases of poisoning due to the use of belladonna plasters. The first case was of a man 47 years old, who had been wearing two plasters for several days and on the day of admission to the hospital two more had been applied after the skin had been rubbed with a coarse towel. The symptoms were those typical of belladonna poisoning.

The second case reported was due to two plasters which had been in place several days.

The third case was in a woman who had been treated by the application of a plaster to the chest. In two hours she showed signs of intoxication.

All the cases recovered comparatively quickly after the removal of the source of poisoning.—*Am. Jour. Med. Sc.*, V. 131, p. 623.

**Creosote in Pneumonia.**—BEVERLY ROBINSON believes creosote is the most useful single agent in the treatment of pneumonia, not only being curative but also preventive. He recommends that it should be given by inhalation, placing some on water which is kept boiling in the patient's room. It lessens the cough and bronchial irritation in a remarkable manner. It may be administered by the mouth, but given by inhalation, any possible irritation of the stomach is avoided. He believes also that the vapors of this antiseptic drug in the room lessen the likelihood of the disease being contracted by the nurse.

In the later stages of the disease, he advises the use of coca as being a cardiac stimulant superior to the other drugs usually advised for this purpose. The great difficulty is that it is very hard to get a good preparation, one that does not contain a large amount of cocaine (which he does not advise), but which does contain other derivatives most valuable in cardiac exhaustion.—*Medical Record*, Vol. 69, p. 529.

## PEDIATRICS

Conducted by

R. S. ROWLAND, M. D.

**Symposium on Rheumatism in Children** was the subject for discussion, in the Section on Pediatrics, at the recent state meeting of the New York Academy of Medicine. The report is of special moment because it contains the expression of the opinion of such men as Holt, Koplik, Winters, Chapin, Gilman Thompson, Walsh and others.

Holt said he had seen rheumatism in an infant, under one year. He had several times known of cases of multiple arthritis from gonorrheal infection regarded as rheumatism for several weeks. Many of the inflammations of the joints, in very young children, were due to pyogenic organisms. This immunity of infants to rheumatism Holt believes due to something pertaining to the diet, or the surroundings of the child. As soon as a child reached an age when exposure to cold or dampness occurred, rheumatic symptoms were frequently seen. These conditions increased with the age of the child. He thought exposure had much to do with the occurrence of rheumatism. Koplik expressed his opinion that the variety of rheumatism seen in infancy was not so much due to the diet as to the fact that certain avenues of infection were absent in infants, which were developed in later life.

Crandall emphasized that one of the most characteristic features of rheumatism in children is the fact that the symptoms are usually not massed together as in adults, but are isolated and distributed over years so that, as Cheadle has aptly said, "The history of a rheumatism may be the history of a whole childhood." The term rheumatic child, therefore, has a peculiar and distinctive significance. Any child who has once clearly exhibited any of the symptoms of the rheumatic series should be considered as a rheumatic child and prophylactic management should be instituted. We do not do our full duty, if we content ourselves with simply treating the various symptoms as they arise.

Crandall discusses the prevention of rheumatism under six headings: clothing, exercise, hygiene, climate, diet and prophylactic medication. The rheumatic child should wear flannel at all seasons; he should have the limit of outdoor exercise, but, remembering that he is more susceptible to cold and wet, cold and wet feet should be especially avoided. Tepid and cool baths should be given

more regularly than to the normal child. Cool bathing, vigorous friction of the skin, and warm clothing are three measures not to be neglected. As a prophylactic measure proper care of the throat and removal of adenoid growths and enlarged tonsils must be strongly commended. Still another measure of importance is instruction of the parent that no attack of illness is unimportant in a child of rheumatic tendency. The climate adapted for rheumatic patients is one that is dry and warm, with a sandy soil and plenty of sunlight, and free from sudden and radical changes. Maintaining the nutrition by judicious feeding and exercise and the administration of cod-liver oil and iron are important features in prevention.

Gilman Thompson concluded his remarks on dietetic treatment of rheumatism with the following statement: This disease is no exception to the fundamental proposition that, as there is no food or single class of foods which is curative of disease, there is likewise none which is causative of disease. Rheumatism can no longer be regarded as a "dietetic disease" and its dietetic management in childhood should not differ essentially from the established principles of feeding during the critical period of growth and physiologic development.

Holt said that two years ago, while in London, he was struck with the very large doses of salicylates that were given rheumatic children in some hospitals. Several cases of rheumatism he saw treated there with 20 grains of the salicylate every two hours, half an ounce being given in twenty-four hours. He personally found it advantageous to use much larger doses than were usually employed in this country, although he had not had the courage to give those mentioned.

Walsh said as for the claim that the salicylates are a specific in rheumatism, anyone who has seen exactly the same results as are produced by these remedies result from the use of any of the other coal tar products, such as phenacetin or antipyrin, will not yield much to this idea. The salicylates lessen pain and quiet restlessness and thus save the heart. This is the main thing to do in rheumatism, for rheumatism does not kill directly, but produces lingering death through cardiac disease. If the salicylates were specific, then, like quinine in malaria, they would cure every case, but it is universally admitted that they do not.—*Archives of Pediatrics*, Jan., '06.

## DERMATOLOGY AND SYPHILIS.

Conducted by

A. P. BIDDLE, M. D.

**Chronic Ulcers.**—Under this title, HEIMANN considers ulcers of the leg, both acute and chronic. An ulcer is the molecular death of the superficial soft structures, differing clinically from necrosis, caries and gangrene. They are always due to infection of the pyogenic variety. Ulcers may be termed "half sections of abscesses."

Ulcers of the leg are more prevalent during adolescence and old age. They are evenly distributed between males and females, except that those of the varicose type are more frequent in the latter. The different varieties are as numerous as there are authorities. Park's classification is as follows: (1) due to traumatism, (2) due to local conditions, (3) due to general conditions. Da Costa's classification: (1) acute, traumatic, (2) chronic, due to general conditions, (3) tubercular, (4) specific, (5) senile, (6) traumatic.

The treatment of those ulcers which present acute characteristics is as follows:

On first seeing the patient, a mercurial purge, followed by a saline, is indicated. Cleanse the parts thoroughly with peroxide of hydrogen, using means to rid ulcer of sloughs and unhealthy granulations. Follow this by any disinfectant, as permanganate of potash, 1:2,000; bichloride of mercury, 1:1,000; lysol, 1:100; or any the physician may prefer. Caution is necessary in strength of solution used, as one too strong sets up a violent inflammation, which must be fought against. To paint the ulcer with pure carbolic acid or iodine is also advocated by some, but it is best to use diluted solutions for reasons given. After an ulcer is thoroughly cleansed, apply hot fomentations for the first twenty-four or thirty-six hours and change as often as dressings become cold. This rids ulcer of sloughs, etc., and also materially assists in allaying the inflammation and stimulates healthy granulations to sprout. Over this apply a snugly-fitting bandage from toes up to the knees. Canton flannel, rid of its selvedge, is best material for this purpose, as it readily assumes the shape of the leg and supports the blood-vessels better than any material. Insist on the patient staying in bed with the leg in a slightly elevated position, but if this is not possible through entire treatment, at least it ought to be insisted upon for the first few days. Rest, position, and support are often all that is necessary in curing these cases. If

the discharge is offensive, any deodorant is used. Potassium permanganate is the best. Iodoform or its sinergistics is used for this purpose. If the inflammation in the surrounding parts is intense, lead-water and opium or 25 per cent. ichthyol ointment is used. Give tonics and restoratives when needed. Bichloride of mercury and arsenic are the best for this purpose.

As a rule, chronic ulcers are chronic from the start. One should keep the bowels open and treat the constitutional conditions in the usual manner. Insist on rest and elevation. Absolute cleanliness is necessary. Dress antiseptically for a few days, then apply ointments. That consisting of balsam of Peru and oleum ricini is as good as any. This dressing must be changed at least once in 24 hours and the ulcer thoroughly cleansed.

If painful, a nerve is exposed. Several applications of silver nitrate or of stick copper sulphate will stop this pain. It is often necessary to do this under cocaine anesthesia.

Do not use powders early, as they form a crust. Flannel bandages and later those of rubber or rubber stockings are indicated. The latter are especially useful in the varicose variety. When the base of an ulcer is bare and granulations refuse to sprout, scarification is indicated. The incisions must be deep and freely made, which bring a fresh and healthy blood supply to the part. Sometimes it is necessary to repeatedly scarify before an ulcer will heal. Strapping assists in keeping down granulations.

**Syphilitic Ulcers.**—These include the class set off to themselves. As a rule, they are located in front of the knee, or may be found in the calf or in any position. In some instances the ulcer is part of the secondary eruption; in others, a degenerated gumma from the shaft of the tibia. They are usually crescentic in shape and appear in groups. Under local treatment and the usual constitutional therapeutics they heal readily.

**Varicose Ulcers.**—Ligate the varicose veins by any of the many methods and treat as a chronic ulcer. A rubber bandage or stocking should be worn after the ulcer has healed. Some advocate incising of the veins, but this is a point in dispute among the authorities.

**Senile Ulcers.**—Treat as a chronic ulcer. Attempt to build up the system by tonics and hygienic surroundings. In the aged, do not confine in bed.—*Lancet Clinic*, April 24, 1906.



## OPHTHALMOLOGY.

Conducted by

W. R. PARKER, M. D.

**Some Ophthalmologic Phases of Diseases of the Accessory Sinuses of the Nose.**—POSEY, of Philadelphia, has noticed that ocular symptoms, of a type not generally recognized as characteristic, frequently precede the manifestations of sinus disease. "The possibility of the nose or accessory cavities being a cause of eye disease is dismissed in most instances by the surgeon upon the negation of the patient having ever suffered from nasal catarrh, or by the failure of one, or at best, two rhinologic examinations to reveal the presence of pus in the nares." An active sinusitis may exist without nasal discharge, either through retention or from the simple congestive nature of the inflammation, and may cause no subjective nasal disturbances whatsoever. While many forms of eye disease may be occasioned by sinus affections, POSEY has arranged his cases into the following groups:

1. Moderate stasis in the circulation of the optic nerve, as indicated by slight ophthalmoscopic changes and by an interference with vision. In two cases there was a retrobulbar inflammation of the nerve, due to sphenoid sinusitis, in which not only the light sense was diminished, but scotomata were produced. Ophthalmoscopic examination was at first negative, but later pronounced pallor of the temporal half of the disc manifested itself.

2. Conditions occasioned by an involvement of the fifth nerve. Pain, or the sensation of a foreign body in the eye: Herpetic keratitis.

3. Edema of the lids. This may be the early and only ocular symptom of accessory sinus disease.

4. Paresis and actual palsy of the extraocular muscles. The true origin of the paralysis in these cases is often overlooked, and many of them attributed to rheumatism or catching cold, both of these conditions being attended at times by symptoms similar to those provoked by sinusitis.

5. Pseudo-migraine ophthalmoplegique. With variations in the drainage conditions of the affected sinus the symptoms may be irregular or intermittent, so that in cases where one or more branches of the oculomotor nerve have been paralyzed the above rare condition may be simulated. The symptoms are those of ophthalmoplegia more or less complete, associated with violent migraine, nausea, vomiting and fever, lasting a variable period, and recurring at long or short intervals.

6. Pseudo-lacrimal abscess. This is generally

due to a frontal empyema, pointing unusually low down, as a consequence of an anomalous distribution of the cells in that bone; to an empyema of the lacrimal division of the ethmoidal cells, which are at times unusually developed, or, finally, to the burrowing of pus from an abscess of the orbit. Although these accumulations generally point above or below the sac, the differential diagnosis may be extremely difficult, especially in the cases described by Peters. Here there is an ectasia of the sac due to blocking of the exits by pressure of pus in adjacent cavities.—*Jour. Eye, Ear and Throat Diseases*, X, 2.

**A New Ocular Symptom in Basedows Disease.**—TEILLAIS NARTES says that a dark discoloration of the lids appears simultaneously with the other symptoms of the disease. He claims he observed this symptom at the same time as Jellinck and Rosin, but the latter secured earlier publication.—*Arch. of Ophth.*, Jan., 1906.

**Primary Cavernous Sinus Thrombosis.**—ZENTWAY and WEISENBURG describe the case of a woman, aged 34 years, with a decided nervous history, who began to have slight exophthalmos and ptosis on the right side probably before the eighth year. These ocular symptoms with additional pain and inflammation of the right eye heralded the approach of the first menstrual period and at each menstruation these symptoms were more severe. Four years after marriage she gave birth to twins, when it was noticed that the exophthalmos was more marked than ever before and that there was ptosis of both eyelids. The ptosis of the left eye soon disappeared. Examination at present shows a marked exophthalmos and almost complete ptosis of the right eye, with marked venous congestion of the eyelid. There is an involvement of all of the cranial nerves of the right side, with the exception of the eighth, and an involvement of the second and third nerves on the left side. The ocular symptoms become more severe at each menstruation. The exophthalmos might have been produced by many causes, but that found with cavernous sinus thrombosis is due to the venous congestion, and it may be that during the menstrual period there is an increase in the amount of congestion. The authors explain the paralysis of the third, fourth and sixth nerves of the right side and of the third nerve of the left side as being due to the pressure exerted by a thrombus in each cavernous sinus. They think the extension of the thrombosis into the superior and inferior petrosal sinuses explains the involvement of the other cranial nerves. They discuss the probable reasons why menstruation and pregnancy affect venous congestion.—*Am. Jour. Med. Sc.*, Feby., 1906.

## RADIOGRAPHY AND ACTINOTHERAPY

Conducted by

H. R. VARNEY, M. D.

**Roentgen-Rays in Military Surgery**—STOKES has described, in a recent article, a few types of wounds that military surgeons are confronted with, and how important the Roentgen Ray has become in military surgery in both the army and the navy.

He estimates that about ninety per cent of the casualties are caused by wounds from shell fragments and splinters in naval warfare.

All of the army hospitals are now completely equipped with X-ray apparatuses. Most of the larger hospitals have an apparatus, modeled according to plans devised by STOKES. It is mounted on a steel truck, with rubber wheels, is easily moved, and can be used in lecture rooms, wards, or laboratories, as occasion demands.

The problem of weight has always been the stumbling block in connection with the portability of these apparatuses, for use during hostilities. Storage batteries gave great satisfaction during the outbreaks in South Africa.

The French have experimented with a radiograph motor wagon which has given some satisfaction and promise for the future.

Two years ago STOKES demonstrated the fact that wireless telegraphy coils may be employed for generating X-rays. He used a tube, multiple spark gaps connecting wires, and a fluoroscope in connection with the wireless telegraphy coils, with most gratifying results.

For the future of army and navy equipment, and for cities in which X-ray facilities do not exist, the reported experiments speak volumes.—*Archives of Physiological Therapy*, January, 1906.

**Physical Methods of Treatment in Skin Diseases.**—ROCKWELL, after considering older and other methods of treatment in skin diseases, says:

"The X-rays and the actinic rays of light are not only valuable auxiliaries to the older methods in the treatment of benign skin affections, but in malignant cases may supersede them, always supposing that such cases are superficial in character. \* \* \* The principles underlying the use of the x-ray in skin diseases may be found its power:

1. To produce atrophy and functional inactivity of the various glandular structures.
2. To stimulate the metabolism of the skin.
3. Its influence on bacteria.

Its influence, therefore, over the functional activity of sebaceous glands renders it of service in acne, acne rosacea, etc., and through this same influence on the sweat glands it does good in hyperidrosis. In stimulating the metabolism of the skin, old inflammations and indurations become resolved and their products absorbed. The beneficial effects following the use of the x-ray in psoriasis eczema and lupus erythematosus may be explained in this way, while its destructive influence over diseased tissue cells, with their low resistance, coupled with the resistive power of healthy tissue cells, accounts for its efficacy in leukemia and superficial epithelioma and tubercular glands. But, after all is said, and whatever the disease, each individual case must be studied by itself and the question of differentiation determined by the practical test of experimental work.

Susceptibilities vary, and there are idiosyncrasies innumerable, and in many cases the personal equation, rather than the name of the disease, must be the determining factor in the selection of the form of treatment best adapted to any given case.—*Am. J. Derm.*, March, 1906.

**Results of Light Treatment in Alopecia Areata.**—KROMAYER reports a series of cases of Alopecia Areata, treated by the light. He divides them into two groups; the first, including the less severe cases, involving a smaller area than half the scalp; the second, including those that involved more than half of the scalp, or total alopecias.

The rays used were those of a cold iron light, the exposed part being from 4 to 10 c. m. distance from the electrode. The length of exposures varied from 30 seconds to 10 minutes or more; the number of exposures being dependent upon the reaction of the skin, in each case. Redness, pain, and formation of blister were seen on the day following exposure. Different areas react differently; those which show but slight reaction must have additional exposures. If intense inflammation has been produced, the light exposure must be discontinued until inflammation subsides, then renewed exposures given. A continued reaction should be kept up until new hairs appear.

In the first group there were no failures; and in the second group, 25 per cent were failures.—*Monat f. prakt. Derm.*, July 1, 1905.

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## Original Articles

### SMALL HOSPITALS FOR SMALL PLACES

The Oration on Medicine, Delivered at the Forty-first Annual Meeting

B. H. McMULLEN, M. D.

Cadillac

As will be noted, I have departed somewhat in the selection of my subject from any direct relation to the annual oration on medicine. I might have utilized the privilege of the preacher, by accepting the text and referring to it again only in the benediction, or taken to myself the liberty of the after-dinner orator who usually uses his topic as the basis of his opening joke and returns to it no more, had I sought to share in this connection with either the inspiration of the preacher or the glowing fervor of the orator. But the privilege I have taken is based upon a long-possessed and increasing interest in a subject which it seems to me is appealing to all the members of our profession for sympathy and favor beyond that which it has to this time received.

I am not unmindful of the wisdom and value of repeated reviews of the subject of medicine on these occasions, nor of the interest there may be in gathering from the opinions and practice of an-

other some suggestions applicable to the day by day problems of our life work. But our medical literature is rich with offerings on that subject; observation, experience, laboratory results, theories, and the carefully prepared reviews of our recognized specialties, all contributing to a fund and flow of presentation relating to medicine already beyond the ability of the average physician to read and digest. I am therefore quite sure that little or nothing will be lost in my departure from the program, however lacking my offering in another direction shall be from the purpose I have had in mind.

In asking your attention for a time to the subject of the small hospital for cities and communities where no other than the small hospital could be possible or desirable, I realize that I am entering upon a discussion to which most of you have given attention and thought, many, perhaps, to degrees beyond that which has been possible in my own case.



I am sure that the experience of those of you whose practice has been at all related in kind and character to my own has suggested in advance all the arguments that I can here present in behalf of the small hospital for small places. I have always shared the sentiment expressed by the declaration, that the school-house should follow the flag, and through recent years I have coined for myself another declaration, which I think includes practical value as well as patriotism, that following the flag and the school-house as closely as possible should come the hospital.

Permit me here to express, if I can, some of the thoughts which have passed through my mind concerning this need, as an aid to the physician, as a boon to the community, and as a forceful factor in educating public sentiment in some very necessary directions. It is true, I know, in the experience of all my brother physicians, that lack of intelligent use of the right rules of living is the foe to health one most often meets. A little while ago it was not thought necessary to regard as worthy of attention, any of the requirements which today stand first in our estimation. The incantation of the medicine man, superstitious ceremonies, blind acceptance of the so-called decrees of fate, made use of by the cunning and the better informed, were so long utilized that to this day, in one form and another, they play an important part in connection with the problems of our work.

We meet men and women every day who seem to think that the horns and cloven hoofs of his Satanic Majesty are somewhere hidden in the dark rooms of every doctor's office. And today organizations exist, some of them claiming re-

lationship to science as well as to religion, which actually teach their adherents to disregard the laws of life and of living, of disease and of death, with the expectation that denial and disregard will relieve them from the penalties imposed by the Creator of the race and the Originator of life.

I want the modern hospital to be to every community the school room in which the principles of our profession can be portrayed. With all the limitations that would necessarily exist in connection with an institution such as I have in mind, I am yet sure that its educational value to the community, as well as to the members of our profession who would share its privileges, would not be the least of its contributions. That the worthy members of our profession do hold, and have always held, that sunshine within, as well as without, is an aid to health, that courage and hope and faith have their place in our work, that we do not have to return to the dark ages in order to make the best possible use of the relation of the mind to the functions of the body, are illustrated in the day-by-day experience of every good hospital. These facts are also illustrated in our own ordinary practice, but we cannot control the environment of the private sick room, nor have its influence teach something of value to an entire city, as can be done through the hospital.

I am sure it is the experience of my brother practitioners that the patient who knows something of hospital practice, who through the experience of himself or an immediate member of his family, has gained information concerning hospital requirements and hospital care, and its freedom from the individ-

ual idiosyncrasies which serve to hinder and embarrass their best work, find in such patients elements of assistance that cannot come from those who know nothing of hospital methods and hospital requirements. My plea for the hospital to accompany the school-house wherever possible, therefore, is based on the service it can render, and will be echoed, I am sure, by those who recognize the need of that service, even though we may not have yet reached the point where such general provision can be made.

I fully agree with Ochsner's statement, that modern medical and surgical achievement has made hospital care a necessity. If we can bring this necessity to the recognition of others as plainly as it appears to us, better results than we have heretofore hoped for will follow, and those who in future years do the work which we are now seeking to do will make more rapid progress in the direction for which we are now urging sympathy and action.

It is authoritatively reported that there are about seventy-five hospitals now in successful operation in Michigan; forty being of a private character and having a total capacity of one thousand beds, and thirty-five public hospitals with a capacity of about twenty-five hundred hospital beds, or less than one for each one thousand inhabitants of this great state of which in so many respects we have reason to be proud.

Those who have given this subject some of the attention it deserves declare that there should exist an average of at least one hospital bed for every one hundred inhabitants. Perhaps those who so believe and so insist are optimistic prophets and over-enthusiasts, but I am sure

the Michigan members of our profession will agree that it is optimism and enthusiasm in a very desirable direction.

The cost of the hospitals already established in Michigan, I am told, varies from one hundred dollars per bed in some of the smaller buildings, to five thousand dollars per bed in a few of our larger and more recent structures, one thousand dollars per bed being considered a reasonable cost for an average up-to-date, fire-proof hospital building. I am further informed that sixty per cent of all our buildings are wooden and were constructed primarily for residences or other purposes, and with a few alterations were converted into hospitals. These buildings, while not altogether satisfactory and lacking much in the way of proper ventilation, hygienic plumbing and conveniences, nevertheless demonstrate the fact that they are very much needed and should be made use of until such time as better buildings can be obtained. Forty per cent of the buildings were constructed primarily for hospital purposes and are built of brick and stone, or brick and wood, many of them fire-proof, and having all the conveniences that modern architecture can provide and constructed with a proper appreciation of our present idea of sanitary law. The management of the larger institutions is entrusted to a superintendent and a board of directors, or to one of the sisterhoods, and the smaller institutions to a matron, a trained nurse or a local physician.

The management of the country hospital is the most serious problem in connection with these institutions. Until such time as we can offer a better system, I should advise the management of one of the sisterhoods. They have de-

veloped, through a long-time experience, a system that seems to insure the success of their institutions. This statement does not necessarily apply to private hospitals owned and managed by physicians.

Our small hospitals, outside of the large cities, are doing a needed work and doing it well; in many cases better than it could be done in the more imposing hospitals of the cities. They afford a means of saving life and limb in numerous emergency cases that would be lost before a patient could reach a hospital in a distant city, so that even if the facilities for caring for patients were notably inferior to those of the large hospitals, their greater convenience of location should turn the balance in their favor. In many of the smaller hospitals, however, the facilities are quite equal to those of the larger hospitals, and though they cannot take care of as many patients at a time they can care for those they do receive with all the refinement of modern medical and surgical art.

Though the primary object of a hospital is the care and cure of the sick and injured, as I have suggested, it performs another important function in the training and better education, not only of the medical and surgical staff, but also of every doctor in the community. The hospital encourages more careful methods, greater cleanliness, better hygienic conditions, introducing laboratory methods, and compelling the older physicians, as well as the younger members of the profession, to adopt better ways and greater exactness, not only in the hospital, but also in their private practice. All this raises the standard of the local profession, both intellectually and pro-

fessionally, and for this reason, if for no other, I would urge again that our small cities cannot afford to be without a hospital.

Home pride, as well as home love, the value of real estate and stock of goods, all the interests which serve to bind the members of a community to each other and to make for permanency the moral and material values they seek to mutually uphold, will be assisted through the establishment of a hospital, as a permanent part of such possessions and as a valuable addition to such interests. It may be true that insistence in the direction of this plea will cause the charge to be made that we are in advance of public opinion, that the need of a hospital in every community is not yet recognized and that labor in its behalf will be slow and discouraging; this may be true, but I am glad to know that I am appealing to a profession that has never lagged in the rear when a real duty appears at the front. The very word "hospital" was coined out of generous and chivalrous inclinations to care for those who needed to be cared for, to provide for those who might else suffer and die.

I believe that hobbies are helpful if they are sensibly directed. I know that enthusiasms are productive of enjoyment and tend to higher living and better living, if they have a worthy purpose. I wish I could make interest and favor for the establishment of hospitals in Michigan the hobby and the enthusiasm of every doctor in our state. That answer given by the little daughter of a physician in reply to a question as to where her papa was: "I do not know where he is just now, but I do know that wherever he is, he is helping somebody," can be made to apply to all who



in this work will take some part.

I do not wish to urge favor for the larger establishment of hospitals as the only interest the physician should possess or as the only subject of public importance he will need to give attention to. A vein of humor, which I happily possess, prevents me, I think, from encroaching upon the serious precincts of the crank, but humor also aids us all

in interpreting the real needs of our kind. The highest human incentives, love for those around us, hope for the days and years to come, patience with conditions we can make better but cannot remove, will lead us to see our duty in the direction I have named, and my prayer is that they may successfully urge us to do our best to perform it.

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### CYTODIAGNOSIS OF ORGANIC PSYCHOSES\*

CLARENCE E. SIMPSON, M. D.

Eastern Michigan Asylum, Pontiac

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Within the last few years observers have called attention to the fact that in certain diseased conditions of the central nervous system, accompanied by irritation of the meninges, changes are produced in the cerebro-spinal fluid. These changes have been studied not only from a chemical, from a bacteriological and from a physical, but also from a cytodiagnostic or histological point of view, i. e., the study of the cellular elements contained in the cerebro-spinal fluid.

For purposes of diagnosis the chemical examination of the cerebro-spinal fluid is of little value.<sup>1</sup> An increase in albumin occurs under some conditions, but is accompanied by other changes more valuable for diagnostic purposes. The bacteriological findings, when positive, are of great importance in diagnosing meningitis, for by a careful examination

the specific cause of the inflammation can be isolated and identified.

The application of cytodiagnosis to the cerebro-spinal fluid, first introduced by Widal, Sicard and Ravaud<sup>2</sup>, in 1900, has proved to be a procedure of much value. Normally the fluid contains a very few leukocytes—one or two to the cubic millimeter, usually of the small lymphocyte variety.<sup>3-5</sup> When the meninges are the seat of irritation or inflammation the cellular elements of the fluid are increased, and from the number and character of these cells inferences may be drawn regarding the nature and intensity of the pathological process. This change seems in some ways analogous to the changes in the blood cells observed in infectious conditions. For example, an infection by one of the pyogenic bacteria produces an increase in the polymorphonuclear leukocytes of the blood. When this infection involves the meninges there follows an increased

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\*Read May 1, 1906, at a meeting of the staff of the Eastern Michigan Asylum.

number of these cells in the spinal fluid.<sup>4</sup> In conditions accompanied by a chronic irritation of the meninges—not a septic infection—the cellular increase is confined to the lymphocytes. This change has been frequently observed and is of considerable diagnostic value in tuberculous meningitis.

Cytodiagnosis of the cerebro-spinal fluid in cases of insanity, both with and without a demonstrable organic basis, has been investigated by a number of observers within the past four or five years. Their reports show some variation, as is to be expected from a lack of uniformity of technic and from a limited number of investigations made. In the main, however, they agree that an increase of the lymphocytes of the cerebro-spinal fluid is indicative of meningeal irritation.<sup>6</sup> Thus in such conditions as paresis, tabes dorsalis, and syphilis of the brain, diseases in which there is present, in a varying degree of intensity, meningeal irritation, we usually find a decided increase in the lymphocytes of the fluid. The results of 120 punctures made by Joffroy and Mercier,<sup>7</sup> in 1902, were so constant that they considered themselves able to diagnose paresis or tabes dorsalis on the presence of a lymphocytosis, and to exclude it when the count showed no increase. Kramer<sup>5</sup> made a study of 29 patients by this method, with the following results: Cases of dementia praecox, Huntingdon's chorea, epileptic insanity, melancholia, chronic alcoholism, and pseudo-diabetic tabes showed no increase in the number of lymphocytes, while nine of the cases of paresis investigated gave an average of 27 cells to the cubic millimeter. In the other two the count was 129 and 145 respectively.

Bernstein<sup>4</sup> reports finding very few cells, or none, in six cases of brain tumor. A few were found in each of three cases of chronic pachymeningitis. Dana,<sup>3</sup> while not making an accurate enumeration of the cells, found their number decidedly increased in nine out of eleven cases of paresis. Two cases of brain tumor showed no lymphocytosis, and the same condition was present in congenital hydrocephalus, alcoholic insanity, and Karsakoff's psychosis. Fraenkel<sup>8</sup> reports an increased number of cells in tabes, paresis, and multiple sclerosis. Other writers report findings similar to those already quoted.

From these data it is seen that we may expect to find a lymphocyte increase in cases of paresis, tabes, and syphilis of the central nervous system, and a normal number in manic-depressive insanity, melancholia, dementia praecox, and other psychoses, unaccompanied by meningeal irritation. Lymphocytosis indicates only meningeal irritation.

As a general proposition it is probably true that the more intense the irritation the greater is the lymphocytosis. This would be analogous to the behavior of leukocytosis of the blood cells in a septic infection. This is the conclusion Fischer<sup>9</sup> reaches after finding in two cases, proved to be paresis by autopsy, a marked lymphocytosis in one and almost an absence of lymphocytes in the other. He reasons that the only inference which can be drawn from cytological findings is as to how markedly and how extensively the meninges are infiltrated, and to some extent whether the process is slow or rapid.

Assuming this to be true, we can explain certain findings in cases of paresis,

which at first sight seem contradictory. Cases 14 and 16 of our list, both diagnosed clinically as paresis, give respectively 41 and 58 cells per cubic mm.; while cases 17 and 19, also cases of paresis, show only an average of 0.75 and one and one-half cells. Case 16, however, is of only two and one-half years' duration, and the disease is at present rapidly advancing. Case 14 is of only eleven months' duration, but has reached a stage in which both physical and mental symptoms are marked. On the other hand, cases 17 and 19 are both old cases, having been in the asylum ten and twelve years respectively, and at present are in a quiescent state. We might expect from clinical data that meningeal irritation would be less active in them than in the other two cases, and the lymphocyte count substantiates this opinion. Other examples of the coincidence of a low lymphocyte count, with subsidence of the pathological changes, and a high count with active changes, will appear later in this paper.

With regard to the time at which a lymphocyte increase occurs, it is claimed<sup>7</sup> that it often precedes the disturbance of speech and pupillary phenomena.

In performing the lumbar punctures tabulated in this paper, the following technic has been followed: The patient is placed in a sitting position, inclining slightly forward. His back, in the lumbar region, is thoroughly cleaned, and a spot about three-fourths of an inch below the level of the crests of the iliac bones and the same distance to one side of the median line, is made anaesthetic by infiltrating the skin with cocaine. Under strictly aseptic conditions, the hollow needle is forced through the skin at this point, and, giving it a slightly

upward and inward direction, the intervertebral foramen sought. Usually this can be located without any difficulty. The needle frequently strikes the lamina on the first thrust, but its further entrance announces its penetration of the spinal canal and the subarachnoid space. The trocar is then withdrawn from the needle and the fluid allowed to run out. The first few drops are permitted to escape, and the next five to ten c. cm. are collected in a graduated centrifuge tube. Usually the fluid comes in drops—one to three to the second. In appearance it resembles water. Not more than ten c. cm. are removed, and less if it drops slowly, as though a limited amount were present. The removal of large quantities occasions headache, nausea and vertigo. When performed as above described the procedure is practically painless. Two or three patients have complained of slight pain as the needle penetrated the deeper tissues; the majority experienced no unpleasant sensations, either during the operation or afterwards. A few even declared they felt better.

If performed under aseptic conditions and care is taken not to remove much fluid the procedure is not dangerous. A fatal result has been reported in a few instances, but this has resulted from conditions infrequently found, such as rupture of a softened cerebral tumor<sup>10</sup> or rupture of an aneurysm of the vertebral artery.<sup>11</sup> Dana<sup>3</sup> regards the operation as harmless, although agreeing with others that care must be exercised in cases of brain tumor. Kopetzky<sup>1</sup> declares sclerosis and aneurysms of the cerebral vessels contraindications to lumbar puncture.

In reviewing the methods for enumer-



ating the lymphocytes in the spinal fluid, a wide divergence in technic is apparent. Nearly all writers agree that the cellular content must be concentrated by centrifuging. The majority then remove a drop of the sediment with a pipette, place it on a slide, dry and stain it, and in a rough way determine whether there be few or many cells in the microscopic field. It is evident that there are many chances for error in this method, and that the final result is only approximate. Kramer<sup>5</sup> made an exact count with the blood-counting apparatus. This appears much more accurate. No details of his method are given, but after some experimentation I devised the following method and have followed it in all of the cases reported.

The fluid as collected is centrifuged for ten minutes. All but the lower 1 c. cm. is then decanted by a pipette and preserved for chemical examination. To this lower c. cm. are added three platinum loopfuls of methylene blue, making

no practical difference in the volume, and making the lymphocytes easy of recognition. The fluid is thoroughly stirred with the wire to secure an even distribution of cells throughout its volume. A drop is then placed on the counting-chamber, and its cells counted as in blood work. Calculations are then easily made, reducing the count to the basis of cells per cubic millimeter of unconcentrated fluid. The results obtained in normal fluid correspond exactly to Kramer's results.

Following the technic above described, lumbar puncture has been performed on 25 patients, viz., two cases of dementia praecox; one of epileptic insanity; two of the manic-depressive type; one case of syphilitic brain tumor; four classed as organic dementia; three others in which the psychosis is accompanied by tabes dorsalis; and twelve in which the diagnosis is paresis. The results of the lymphocyte count are given in the accompanying table:

NO	NAME	AGE	DIAGNOSIS	DURAT'N	PRESENT CONDITION	LYMPHOCYTES PER C. M. M.	REMARKS
1	F. D. . .	25	Dementia Praecox. .	3 yrs.	Marked dementia. . . . .	1.5	} Normal number 0-2
2	W. M. . .	31	Epileptic Ins. . . . .	16 yrs.	Good health. . . . .	1.1	
3	R. V. H	41	Manio-Depressive. .	22 yrs.	Elation. . . . .	1.9	
4	J. S. D.	44	Manio-Depressive. .	2½ yrs.	Depressed. . . . .	1.3	
5	F. K. .	51	Dementia Praecox. .	11 yrs.	Marked dementia. . . . .	.6	
6	M. G. .	26	Brain tumor. . . . .	1½ yrs.	Symptoms of tumor and pres- sure. . . . .	1.2	Syphilis 5 years ago
7	G. B. D.	48	Organic Dementia. .	2¼ yrs.	Ataxic speech and gait; exag- gerated tendon reflexes; marked arterio-sclerosis. . .	1.3	Condition was preceded by vertigo
8	B. A. .	45	Organic Dementia, Cerebro-spinal scler- osis.	10 yrs.	Active reflexes. Right hemi- plegia. . . . .	2.2	
9	E. N. .	45	Organic Dementia. .	4 yrs.	Reflexes normal. . . . .	3.	Syphilis

10	H.L.F.	56	Organic Dementia...	21 yrs.	Dementia; tendon reflexes absent; Argyle-Robertson pupils.....	.77	Probably syphilis
11	L.McD.	31	Tabes, Organic Dementia....	6 mos.	Cannot walk; knee jerks absent; elbow present; Argyle Robertson pupils.....	78.	Probably syphilis
12	A. D.	45	Tabes, Organic Dementia on another psychosis.....	8 yrs. Tabes	Dementia; ataxia; no knee jerks; immobile pupils.....	42.	May be an irregular parietic.
13	E.E.J.	58	Tabes, Paresis.....	9 mos. Paresis.	Argyle-Robertson pupil; tendon reflexes absent; few mental symptoms; has improved since admission ...	17.	Tabetic arthropathy. 2½ yrs
14	E. H.	40	Paresis.....	11 mos.	Tendon reflexes absent; immobile pupils; ataxic; demented.....	41.	Failing rapidly.
15	F. G.	52	Paresis.....	1 yr.	Absent tendon reflexes; Argyle-Robertson pupils.....	16.3	Elated.
16	W.F.G.	39	Paresis.....	2½ yrs.	Feeble, demented; knee jerks exaggerated; pupillary reaction present.....	58.	Rapid failure.
17	C.G.W.	40	Paresis.....	11 yrs.	Right knee jerk present on reinforcement; left knee jerk absent; left pupil larger than right.....	.75	Able-bodied worker.
18	A.A.	50	Paresis.....	18 yrs.	Marked mental deterioration; immobile pupils; absent tendon reflexes.....	4.6	Syphilitic. Able-bodied.
19	B. B.	57	Paresis.....	12½ yrs.	Marked dementia; knee jerk sluggish; pupils react slowly; gait slightly ataxic....	1.5	Able-bodied.
20	W. B.	57	Paresis.....	2¾ yrs.	Immobile pupils; knee jerk exaggerated; right hemiplegia; motor aphasia 2 yrs	55.	Rapid failure.
21	G. S.	52	Paresis.....	2½ yrs.	Argyle-Robertson pupil; ataxic speech.....	25.	
22	M. F.	26	Paresis.....	1¼ yrs.	Exag. tendon reflexes; dementia rapidly advancing.....	7.5	
23	E.McI.	45	Paresis.....	10 mos.	Pupil reflexes normal; tendon reflexes exaggerated; remission at present.....	4.3	Syphilis.
24	F. B.	31	Paresis.....	3½ yrs.	Immobile pupils; absent tendon reflexes; condition advancing.....	27.6	Syphilis.
25	W. F.	52	Paresis.....	2 yrs.	Tendon and pupillary reflexes absent. Much dementia....	49.	Syphilis. Failing rapidly.

Of the first five cases appearing in the table, nothing further need be said than that their lymphocyte counts are normal. The case of brain tumor (number 6) also shows a normal count. A practically untreated syphilis has been in existence for the past five years.

The symptoms of the seventh patient are strongly suggestive of paresis, but the lymphocyte count is normal. In view of the presence of a marked arteriosclerosis and the history of persistent vertigo, his condition is probably due to changes produced by arterio-sclerosis. Patient number eight is primarily one of cerebro-spinal sclerosis, and presents a normal lymphocyte count. The next two organic cases, both probably syphilitic in origin, are stationary and show no evidence of meningeal irritation.

The three cases of tabes, it will be seen, show a decided lymphocytosis. All show characteristic disturbances of tendon and pupillary reflexes. Fischer's theory of the parallelism between a high lymphocyte count and extensive or rapid involvement, affords an explanation of the marked differences in the three counts. The first case (number 11) is an acute one, advancing steadily and already showing considerable involvement. The second is more chronic, but is at present progressing; while the last has never had as extensive involvement as either of the others, and is at present better than when admitted six months ago.

A study of the twelve cases of paresis affords an interesting confirmation of the theory of parallelism just repeated. Cases 14, 16, 20 and 25 are all cases in which the pathological changes seem to be rapidly advancing. Case 16 was first classed as an alcoholic. Three months

after his admission a note states, "Physical examination fails to show any symptoms suggestive of organic cerebral changes." Nine months after his admission, manic-depressive insanity was suggested, and that diagnosis was apparently held for nearly a year. During this time he was disoriented, often excited, very delusional, and hallucinated. During the last part of 1905 evidences of organic involvement appeared and have since progressed rapidly, as a count of 58 would indicate. Whether a lymphocyte count would have thrown any light on his condition two years ago is merely an interesting speculation.

The very low counts in cases 17, 18 and 19 are now understood and do not disprove the diagnosis of paresis. They are all old cases, in which the disease has been at a standstill for years. Although showing on neurological examination evidences of organic changes, their histories show that these changes took place some time ago, and no evidence of pathological progression has been observed recently. On the contrary all three are able-bodied individuals. The low counts are merely laboratory confirmation of the fact already noted clinically, that the disease processes are checked and have been checked for a long time.

In this connection it is interesting to compare case 23. Although a case of recent origin, the neurological findings would indicate that the disease had never progressed far. Since coming to the asylum a decided improvement in her physical condition has taken place, amounting to a remission. It is possible that a fall in the number of lymphocytes occurs in every remission. There is no work on this subject re-



ported in the literature. A thorough investigation of the matter would be of considerable interest.

The remaining cases, 15, 21, 22 and 24, are of no special interest in this connection.

#### Conclusions:

1. An increased lymphocyte count denotes meningeal irritation.
2. No lymphocytosis is present in cases of dementia præcox, epilepsy, manic-

depressive insanity, or arterio-sclerosis.

3. An increase of the lymphocytes seems to occur only with paresis or tabes, and its presence in a case in which tabes can be excluded is evidence of paresis.

4. As a rule the degree of cellular increase is proportionate to the amount and rapidity of pathological change.

5. A normal lymphocyte count is not proof of the absence of paresis. It may mean only an arrest in the progress of the disease.

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Simple incision is not sufficient in the treatment of Bartholinian abscesses. They should be cauterized daily with iodine, and if they recur, excised.

When opening a retropharyngeal or peritonsillar abscess in a small child, by the buccal route, have the head dependent and instruments at hand for tracheotomy. These instruments are needed but rarely, but then urgently.

In chronic osteomyelitis of the jaw it is better to wait months for a sequestrum to form than to operate a dozen times for the removal of necrosed bone.

When shaving the hair in the neighborhood of a boil, draw the razor from the base to the apex

so as not to drive micro-organisms deeper into the tissues.

Exposure to the X-rays causes atrophy of the sweat glands; radiotherapy is proving the most satisfactory treatment for hyperidrosis.

Catheterization sometimes makes the evidences of "appendicitis" or "abdominal tumor" vanish with the escape of the urine from a distended bladder.

When suturing a wound of the scrotum, if the tissue (dartos) is contracted, apply a warm compress for a moment to cause relaxation.—*Am. Jour. Surg.*

## URIC ACID DIATHESIS\*

W. P. GAMBER, M. D.

Stanton

The history of uric acid dates back to a time easily remembered by American physicians. Karl W. Scheele, in 1776, and later but in the same year, T. Bergman discovered this substance as a constituent of stone in the bladder, and soon after it was recognized as a normal ingredient of the urine. In normal urine, when fresh, the uric acid and urates are always in solution; but after standing from 12 to 24 hours, a reddish-gray or brick-dust sediment forms, making the urine turbid, but it readily clears up on heating. If this deposit forms in a few hours' time, it is due to excess of uric acid and urates. If allowed to stand for some time, the microscope will reveal free crystals of uric acid. The brick-dust sediment consists of amorphous urate of soda, but at times there is in combination with it, crystals of urate of soda and uric acid.

Diathesis is the natural or congenital predisposition to a special disease.

Lithemia is an excess of lithic or uric acid and the urates in the blood. It is due to imperfect metabolism of the nitrogenous elements.

Uricacidemia is the accumulation of uric acid in the blood,—same as uricemia.

Uric Acid Diathesis, then, is a natural or congenital predisposition to the accumulation or excess of uric acid and

the urates in the blood and tissues of the body.

Frequently an excess of uric acid takes place in the body without the uric acid diathesis, yet these terms, namely: Uric acid diathesis, uricacidemia, uricemia and lithemia are so closely associated that no attempt will be made to separate them; and, while the subject matter of this paper will have reference mostly to cases of this special diathesis, it will not exclude those cases in which there is an occasional excess of uric acid, for it would be a difficult matter to draw the line.

It has been demonstrated that the oxidative origin of a large portion of uric acid is derived from the nucleins and purin derivatives in our food. Nuclein is a phosphorized proteid ( $C_{29}H_{49}N_9P_3O_{22}$ ) forming the essential constituent of the nuclei of cells. The products of nucleins in the process of metabolism are the xanthin bases,—as purin,  $C_5H_4N_4$ ; hypo-xanthin,  $C_5H_4N_4O$ ; xanthin,  $C_5H_4N_4O_2$ ; uric acid,  $C_5H_4N_4O_3$ .

According to Schittenhelm and Mendel, from newer observations, it appears that the spleen, lungs, liver, intestines, muscle and kidney are all capable of converting purin bases into uric acid; and that the kidney, muscle and liver can, in turn, further disintegrate the newly formed uric acid.

There are many others belonging to this class: Caffein of tea and coffee, theo-

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bromin of cocoa and theopholin are all purin bodies capable of transformation into uric acid. Meat contains large quantities of xanthin and purin bodies; sweetbreads, peas, beans, mushrooms, asparagus and beer are all rich in purin bodies. Bouchard gives the amount of xanthin and urates in the following articles: Meat extracts contain 63 grains to the pound; tea, 175; coffee, 70; and cocoa, 59. It matters not whether these xanthin bases get into the blood as hypoxanthin, xanthin, uric acid, or caffeine the effect upon the blood-pressure and the system in general is the same.

Just so long as man is careful with his diet, eating nothing to produce an excess of urates and uric acid in the system, and continues to excrete these substances in normal quantities, just so long may he expect to remain in good health,—barring contagious diseases and accidents. But, on the other hand, let him eat large quantities of meat, game, poultry; drink wine, beer, strong cider, tea and coffee; take his ease with no exercise to produce perspiration, and he will soon be in a condition to develop disease.

Uric acid and urea are very closely related to each other. In health they maintain a marked proportion to each other, and when this regular proportion is interfered with, something has gone wrong in the human economy. Uric acid yields urea as one of its oxidation products, and experimenters were led to accept two hypotheses,—either all albumin, on oxidation to urea, passes, at sometime or other, through an uric acid stage, or albumin is normally oxidized directly to urea, but under certain pathologic conditions to uric acid instead.

The amount of urea excreted in 24

hours by a man in health and weighing 140 pounds, is about 400 grains, and as uric acid should be in relative proportion to urea as 1 to 40, the same man should excrete normally about 10 grains of uric acid. Bishop says: "When this proportion is disturbed by a relative increase of the uric acid, certain disturbances of a vascular and neurotic character arise."

For many years Alexander Haig was a sufferer from migraine, and studied very extensively in his own person the relation of uric acid to the production of attacks of this disease; and while thus suffering from migraine he found the uric acid increased to the proportion of 1 to 20 or 25 of urea, whereas before and after attacks he found it was 1 to 40, and the headache was proportionate to the excess of uric acid over the urea, and not to the amount of alkali used to bring the uric acid out.

Bishop found the proportion of uric acid to urea in hay fever as high as 1 to 25 and 1 to 13, while 21 grains were being excreted in 24 hours. The disorders of the nervous system that Murchison associated with lithemia are: "aching pains in the limbs, lassitude, pain in the shoulders, hepatic neuralgia, severe cramps in the legs, headache, vertigo and temporary dimness of vision, convulsions, paralysis, noises in the ears, sleeplessness, depression of spirits, irritability of temper, cerebral symptoms, and a typhoid state."

Haig maintains that the presence of uric acid in excess accounts for the exacerbations of pain in rheumatism and gout.

Bishop says: "In persons suffering from intense pruritus, uric acid and the urates have been found in excess."

Haig says: "Uric acid in the blood in



excess contracts the arterioles and capillaries all over the body, producing the cold surface and extremities, raising the tension of the pulse and slowing the heart."

Thomas G. Mays attributes attacks of angina pectoris to the increased formation of uric acid, which is incidental to the gouty and rheumatic diathesis, and agrees with Haig in attributing migraine to the irritating effects of the uric acid.

During the preparation of this paper I received a reprint of a well written article by Dr. A. B. Conklin on "Cardio-vascular Changes Due to Lithemia." In this paper the high arterial tension is recognized as being due to lithemia, and that arterio-sclerosis is a result of high arterial attention; and, as the maximum blood pressure is nearest the heart the coronary articles are the first to suffer, so that disease of the coronary arteries predisposes to attacks of angina pectoris and only requires some excitement or a lithemic condition, as the exciting cause or causes, to increase arterial tension and bring on an attack. While atheroma of the coronary arteries predisposes to angina pectoris, this affection may result from hypertension alone, which is shown by the absence of coronary disease or other structural changes in some fatal cases.

N. S. Davis and others add the following to the list of manifestations of uricacidemia: "Loss of appetite, nausea and vomiting, flatulent indigestion, diarrhea, intense itching, asthma, blindness, deafness, numbness of the skin and creeping sensations, neuralgia, sick headache, irritability of temper, etc."

Rachford, Filehne, Paschkin, Sajous and Croftan attribute these toxic symp-

toms to the alloxuric bases,—xanthin, hypoxanthin, adenin and guanin, and not to uric acid; and in the opinion of Sajous it is by their direct influence on the adrenal secretions;—so then if it is your pleasure to believe that these symptoms are due to the alloxuric or purin bodies only, perhaps during their transition stage to uric acid; and that, as is claimed by some, that inflammation of the fibrous tissues is due to these same substances, making a suitable soil for the action of disease germs and the deposition of urates, it matters little, for they are all derived from the nucleus of our foods and various tissues of the body in the process of metabolism.

Under favorable conditions the administration of phosphate of soda or some other alkali by increasing the alkalinity of the blood and causing too rapid elimination of uric acid products will have the same effect upon the circulatory and nervous system, giving rise to increased blood pressure and other symptoms attributed to the lithemic condition. In one person it may be an attack of migraine, in another an attack of gout, asthma, nervous catarrh, headache and in epileptics, a fit.

In these cases of uricacidemia, if we diminish the alkalinity of the blood by the administration of phosphoric or some other acid, we free the blood from uric acid by driving it back into the tissues; the arterioles become relaxed, and the headache, mental depression and other symptoms are relieved. Bishop says: "When the nervous system is depressed by fatigue, deficient food, etc., a smaller amount of uric acid in the blood will suffice to produce disturbance of function than at other times." Heredity is probably the chief factor in determining the

direction in which the uric acid diathesis will affect an individual, whether it results in rheumatism, gout, migraine, angina pectoris, asthma, nervous catarrh or some other neurosis." The attacks due to uric acid come on morning after morning about the same time. This is accounted for in this way: The blood is the most strongly alkaline from two to nine a. m. During these hours, the blood is the most heavily charged with uric acid, and it is during these hours that patients suffer most from angina pectoris, migraine, hay fever, and other functional nervous disorders. The blood is the least alkaline during the hours of bodily activity, or between the hours of 12 o'clock noon and 12 o'clock midnight,—the lowest point of alkalinity being at the latter hour. During this time, there is only a small secretion of uric acid and the amount circulating in the blood is small. As the alkalinity of the blood begins to increase towards morning, the uric acid is dissolved out of the more alkaline tissues in which it has been stored,—the liver, spleen, cartilages, joints and fibrous tissues,—and again thrown back into the blood, which becomes rich in uric acid, producing, if it becomes in excess, the nervous phenomena and other characteristic symptoms. If it is an acute attack of gout, it is ushered in by a diminution in the amount of uric acid excreted during the last two or three days preceding the attack. When the joint symptoms begin to appear, the amount of uric acid excreted increases and for some days remains much above the average, and then gradually gets back to normal.

To the experienced observer, symptomatology will account for as much as urinalysis in most cases, though the lat-

ter should by no means be discarded, yet the busy physician often finds it necessary to do so. A ravenous, insatiable craving for food is a condition which also marks the storing up of uric acid in the system, and may give timely warning of the approach of a headache, neuralgia, or other symptoms common to the uric acid diathesis. During these two or three days in which the uric acid is being stored up in the tissues of the body, the elimination of uric acid is diminished. Soon the limit is reached, there is a change, the blood becomes more alkaline, dissolving the uric acid out of the tissues of the body and we have lithemia, with a slow, high-tensioned pulse, nausea and vomiting, etc. Now the administration of acids will free the blood, drive the uric acid back into the tissues of the body and the pain and other symptoms subside.

The various tissues of the body are now loaded with uric acid and urates and unless proper means are taken to eliminate them from the system, their action upon the kidneys diminishes the excretion of urine and after a number of days they become more or less fixed in the fibrous tissues of the body. When deposited in the joints, the condition is called rheumatism, except in distal joints then it is called gout; when in the lumbar fascia, lumbago results; when in the fascia that forms the sheaths of the great nerve trunks, sciatica; when in the choroidal tissue, choroiditis results; and when those parts that support the various coats of the intestinal wall, the name is colic. The fibrous tissues of the pelvic organs, especially of women, may be attacked. Many cases of dysmenorrhea are relieved and even cured by following a course of treatment for

this condition. Both Haig and Mays are of the opinion that uric acid causes inflammation of all the fibrous tissues, both of the digestive and respiratory tubes of the larynx and esophagus on the one hand, and of the trachea, bronchi, lungs and pleurae on the other,—rendering the soil more suitable to be attacked by the germs of these diseases. If this be true, there is no fibrous tissue of the body which is not liable to be attacked.

Fevers in general, pneumonia and enlarged spleen cause increased retention of urates and uric acid in the body.

For the estimate of uric acid and urea in the urine I must refer you to the textbooks upon this subject.

There are many so-called "uric acid" solvents on the market. Some of these are proprietary nostrums and are advertised to physicians. The exploiters of the majority of them make such extravagant claims in regard to wonderful cures that it is not safe to place any reliance upon them. I must beg of you to beware of them unless they are of known composition, with exact formulae, in which case they will speak for themselves as to whether they are useful in lithemia. The fact that these remedies dissolve uric acid in a test-tube, outside of the body, is no proof that they do so withing the body any more than we would expect the administration of the mineral acids to dissolve the lime salts out of our bones. It is our duty to study these cases scientifically as much as possible, including the remedies to be used for these conditions; for if not, we will find ourselves in many cases prescribing empirically.

In the treatment of these cases, our effort must be made to prevent the accumulation in excess, or the deposition

of uric acid or urates in the body. This has been attempted in various ways: (1) By lessening the amount of uric acid formation in the system; (2) by trying to increase uric acid excretion; (3) by increasing uric acid destruction; (4) by dissolving and removing these deposits after they have once formed.

Numbers (1) and (2) will be considered together. To increase uric acid excretion it is necessary to increase the excretion of urine and this is thought by many to be best affected by copious water drinking. Waugh says: "The lithia waters have obtained quite a reputation, the greater part of which is due to the water, very little to the lithia."

Hare in his latest edition of "Practical Therapeutics" says: "Haig has pointed out that although lithium forms salts with uric acid in the test-tube, in the body it has a greater affinity for the acid sodium phosphate in the blood, and practically leaves the uric acid to itself. This is an important point, since it proves that the large amount of water generally taken with lithium salts has more to do in relieving gout than the lithia."

Haig has come to look upon water drinking for the cure of uric acid diseases as practically useless. We will admit this to be the case when there is a high-tension pulse with its consequent symptoms at which time he says that the capillaries in the kidneys are contracted, blocked with urates and excretion diminished. Here Haig says the drinking of much water will increase blood pressure and aggravate all the symptoms. In this case, a little acid should be given to drive the excess of uric acid out of the blood and then the uric acid elimination should be begun more gradually. This blocking up of the capillaries with



urates and other effete material takes place all over the body and Haig attributes it to a collemic or gelatinous condition of the blood due to excess of uric acid. In the sluggish circulation from this cause it takes three or four seconds for the blood to return in the capillaries, after pressure on the back of the hand, whereas it should normally return in one and one-half to two seconds. On this account, metabolism is slow and the strength which we should get from albumin assimilation is retarded.

In the use of lithium salts, the carbonate has been recommended in the belief that the lithium united in the blood with uric acid to form urate of lithia, but this is not the case as the affinity is for the stronger bases,—sodium and potassium. When lithium carbonate is given by the mouth, the hydrochloric acid liberates the carbonic acid and forms lithium chloride, enters the blood as such and is eliminated by the kidneys without further change, as lithium chloride. Clinically it has been proven that it does increase the excretion of urine and is, therefore, an efficient diuretic. The other salts of lithium,—citrate, benzoate and salicylate are all found useful. Bishop relies upon lithia to eliminate uric acid in preventing attacks of hay fever.

Hare states that Haig has proved that the salicylates all aid in the excretion of uric acid and thinks they relieve rheumatism in this way. Haig further says: That a common cold can at once be cut short by one or two fractions of a grain of calomel (gr.  $\frac{1}{4}$  to  $\frac{1}{2}$ ) followed by salicylate of soda in 15 grain doses three times a day for a few days; and both Haig and Mays agree that the salicylates act by dissolving the uric acid out of the fibrous tissues. Salol is also useful, as

it splits up in the intestinal canal into phenol and salicylic acid.

Zerner and Ritter, who have worked on this subject, have proven conclusively that di-sodium phosphate is one of the most important solvents of uric acid in the urine and possesses the power of hindering the decomposition of urates into free uric acid.

There are three sodium salts formed from phosphoric acid as follows:

Phosphoric acid,  $H_3POO_4$ .

Mono-sodium phosphate,  $NaH_2PO_4$ ;

Di-sodium phosphate,  $Na_2HPO_4$ ;

Tri-sodium phosphate,  $Na_3PO_4$ .

The di-sodium phosphate and the mono-sodium phosphate occur in the urine normally. The uric acid of the urine is held in solution by di-sodium phosphate and precipitated by the presence of mono-sodium phosphate. Then to prevent lithemia and its results, and the formation of uratic calculi we must increase the di-sodium phosphate and decrease the mono-sodium phosphate. This can be accomplished by decreasing the phosphoric acid or by increasing the sodium.

The nucleins of all our albuminous foods are rich in phosphorus and by the process of oxidation in the system it is converted into phosphoric acid. We also take some with our food in the form of phosphates. Then in order to lessen the formation of phosphoric acid in the system we must limit the ingestion of albuminous foods which are rich in nucleins and purin bodies. Phosphoric acid is also derived, both from disassimilation of food proteids and the catabolism of the proper tissues of the body, and it is that, derived from these sources,

which we can control, remove from the blood and tissues through other channels than the kidneys, by the administration of calcium salts. For this purpose, calcium carbonate is found useful, although lime-water may be given. von Noorden was the first to advocate the calcium salts to combat lithemic conditions and they are now similarly advocated by Dr. A. C. Croftan, of Chicago, who says: "In the first place calcium forms insoluble salts with the alkaline phosphates contained in our normal food, and in this way prevents the absorption of this moiety into the blood. In the second place, calcium, owing to the great affinity it possesses for phosphoric acid, combines with the phosphoric acid encountered in the blood stream, and this proportion is subsequently eliminated in the form of calcium phosphate—not, however, through the kidneys, but in great part through the intestine. This is an important point, for in contra-distinction to sodium, potassium and magnesium, all elements that are chiefly eliminated through the kidneys, calcium is principally (85 to 95%) eliminated through the bowels."

"It will be seen, therefore, that calcium given by mouth can, first, prevent the entrance of preformed phosphoric acid (phosphates) from the food into the blood, and can, secondly, prevent the phosphoric acid formed in the organism from passing into the urine by causing its elimination through the intestine."

The second part of the proposition, the increasing of the sodium in the renal blood, can be accomplished by the administration of sodium salts by mouth, but this treatment should not be followed up for long periods, for the reason that it is dangerous to keep the

urine continually alkaline. Normal urine is faintly acid and should be kept so. Calcium salts given in large doses never render the urine alkaline. Colchicum may be mentioned as one of our highly efficient remedies, especially in plethoric persons. Piperazin, lysidin and lycetol are chemical compounds made in Germany. They are remarkably efficient in eliminating uric acid, but their prices are exceedingly high.

The subject of diet is an important one and needs as much attention, if not more, than the medical treatment. What one person can eat with impunity, others can not eat at all.

Dr. Geo. S. Kieth in his book called "Plea for a Simpler Life," says: His migraine improved very greatly when he gave up butcher's meat in favor of fish, fowl, game and eggs. These latter are quite rich in uric acid content yet have much less than beef and veal—the veal has much more than the beef, and liver most of all. Tea, coffee, cocoa, peas, beans, asparagus and mushrooms have been mentioned. These, including meat, diminish the alkalinity of the blood. Coffee relieves uric acid headache by diminishing the alkalinity of the blood and driving the uric acid out into the tissues. Eating meat will act in the same way, but this is putting into the system more poison which has to come back through the blood in order to be eliminated.

We give the following list of foods which make up a uric-acid-free diet: Milk, containing 4% albumin; bread, containing 8% albumin; cheese, containing 33% albumin; cereal foods, containing 5 to 12% albumin; nuts and almonds, containing 5 to 25% albumin; dried fruits, containing 3 to 5% albumin.

In addition to the above, fruits, garden vegetables, including potatoes, may be selected to suit the taste and they all favor the alkalinity of the blood. A person whose system has a large amount of urates deposited in the tissues may bring about an attack of migraine or other symptoms by eating a hearty meal of potatoes which renders the blood more alkaline, with the evident result of excess of uric acid in the blood. Haig says: "Milk does not harmonize with meat, beer, wine nor tobacco." With a vegetable diet, sugar can be taken more freely without harm, but an excess of uric acid hinders the metabolism and combustion of sugar. Nuts are somewhat difficult of digestion unless thoroughly masticated. These can be eaten in the form of nut-butter, or better still is the "malted nuts." One pound of this, equals nearly three pounds of beef as to nourishment.

For convenience, the relative value of different foods are represented as containing so many calories or food units. One food unit represents about 3.7 grains. The number of calories of food units required daily for a person of medium weight is about 1800, divided as follows: Proteids, 200; fats, 400; carbohydrates consisting of starch and sugar, 1200.

Persons with sedentary habits require less and children require more in proportion.

To show the relative value of foods we give a short list representing the calories or food units per ounce of food:

	<i>Proteids.</i>	<i>Fats.</i>	<i>Sugar and Starch.</i>	<i>Total.</i>
Apples .....	.5	1.3	16.6	18.4
Beans, baked .....	8.	6.6	22.9	37.5
Bread, white .....	9.3	3.7	63.4	76.4
Cheese .....	31.7	38.1	00.0	69.8
Egg .....	16.3	32.	00.0	48.3
Malted Nuts .....	27.6	73.6	51.2	152.4
Meat .....	36.5	66.7	00.0	103.2
Potatoes .....	3.4	.4	28.9	32.7
Rolled Oats, cooked....	3.6	1.3	13.1	18.
Rolled Oats, uncooked.	19.5	19.5	77.2	116.2

In prescribing a diet for a patient suffering with lithemia, it is quite important that the change, if needed, be made gradually. In this way, more and more of such articles rich in xanthin bodies can be omitted as found necessary to be conducive to the enjoyment of good health. A patient who has been partaking freely of meat, tea and coffee and perhaps beer and wine, will keep the blood less alkaline than it should be, and these persons will have a larger amount of uric acid and urates stored up in the tissues of the body. Now, if this meat diet is changed suddenly to a vegetable diet or nearly so, the blood is rendered too quickly more alkaline, the uric acid and urates are dissolved out of the tissues and thrown back into the blood, producing the condition known as lithemia with its high blood tension and other corresponding symptoms—and one of the real dangers from which we have been trying to free our patient.

The above is the diet briefly stated in a case of lithemia, and now we wish to give briefly the medical treatment. We will suppose your patient is suffering from a severe attack of migraine, hay fever, or some other disease or symptom referable to lithemia. You will first give some acid or the nitrites to drive the excess of uric acid out of the blood into the tissues and as soon as the pain and other symptoms are relieved you should follow a systematic course to rid the system from this poison.

To accomplish this result, phosphoric acid, citric or any of the mineral acids may be used, but Bishop, of Chicago, prefers the liquid acid phosphate, which is now sold in bulk. The dose is one-fourth to one teaspoonful, diluted in water, given frequently until desired



effect is obtained. Just at this time a cup of coffee which renders the blood less alkaline, may be of great service, but is to be avoided if possible as you still add more uric acid in the system to be eliminated later. After the attack, say of migraine, has subsided, the acid in one-half teaspoonful doses should be given the following night at bedtime and in the morning and continue the bedtime dose for a few days longer so as to prevent the recurrence of another attack, which might occur at night owing to the high alkalinity of the blood at a time when the organism contains an excess of urates.

Within 24 to 48 hours after the attack of migraine is relieved, steps should be taken to eliminate systematically the uric acid from the system by medical treatment, beginning with moderate doses at first and during the middle part of the day; for, pushing the treatment too fast on the start may precipitate another attack by increasing the alkalinity of the blood and too rapidly eliminating the uric acid. After a few days, if all

works well, the acid may be left off and the uric acid eliminants increased and given more regularly. In place of the liquid acid phosphate we may use nitrate of soda, nitro-glycerine, or in angina pectoris, the amyl nitrite which is found so useful in relieving the high blood pressure. For uric acid eliminants, the lithium and calcium salts, the salicylates and colchicum are the most useful. Each has its strong advocates, but a very efficient preparation may be had by using these in combination. At times if it is thought practical to eliminate more rapidly, especially if the urine is found highly acid much of the time, the addition of sodium phosphate may be expected to give good results. If the deposits of the urates in the joints and fibrous tissues have become fixed, giving rise to rheumatic pains which are quite persistent, it is necessary to give the iodides in addition to the other eliminants, as the iodides alone tend to keep the blood less alkaline than normal, and so must be given in combination with other alkaline remedies.

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**The Early Ocular Signs of Dementia Paralytica.**—HOLDEN presents a set of statistics of ocular signs seen in paralytic dementia which is particularly valuable because in all cases the co-existence of tabes dorsalis was carefully excluded, and because the observations were made fairly early in the course of the disease. Consensual pupillary contraction was eliminated in measuring the pupils, by covering the other eye. He found in a series of 70 cases, absence of the sensory pupillary reflex in 87%, a very high percentage considering the ages of the patients. In 28% there was complete loss of light reflex and marked sluggishness in another 21%. A few of those with diminished light reflex presented also a diminution in the convergent reflex. 70% showed pupillary irregularity, nearly one-half (45%) an inequality in the pupils, and more than half pre-

sented abnormally small pupils, allowance being made for age and refraction. Optic atrophy, frequently stated as present in a considerable percentage of cases, the author failed to note in a single case.—*Jour. Nerv and Ment. Dis.*, November, 1905.

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Lumbar puncture must not be performed in cases of tumor of the brain. Sudden death has frequently happened in such cases.

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A mass protruding from the rectum of an infant or child may be an intussusception and not a mere prolapse.

## LOOKING BACKWARD.\*

DAVID L. WALMSLEY, M. D.,

Detroit.

The task I have allotted myself is not an easy one. It has cost me much study to gather together the few points which I shall present, but should it stimulate your curiosity for delving deeper into the past, I shall feel repaid.

Hippocrates, the father of medicine, a Greek, born at Cos, B. C. 460, laid down this rule, which is worthy our consideration: "We must extract the rules of practical medicine, not from the sequels of consequences, no matter how probable, but from experience directed by reasoning." While we honor him and many great men after his day, we now know that the greater fathers of medicine lived, died and left their marks behind them seven thousand years ago. This is revealed by the Papyrus Ebers, brought to light by the untiring efforts of the immortal George Ebers, and others. The translations of this disclose the fact that long ages ago a standard of medical knowledge existed that was equal to the present, if not superior. Among the contents of this papyrus is a carefully classified list of diseases and their treatment, too long a list, however, to permit reading in the limited space allotted me at this time. I will quote a few headings and descriptions of diseases, the names of which are familiar as if of yesterday, viz.: Diseases of the abdomen, abdominal tumors and swellings, obstructions of the abdomen, swell-

ings of the inguinal region, affections of the stomach, œsophagus and pylorus, obstructions of the small intestines, inflammations, diseases of the liver, intestinal worms, belchings, cramps, jaundice and chlorosis, diseases of the bladder, and urinary organs, obstructions of the urinary passages, cystitis, retention of urine, polyuria, hematuria, diabetes, blood in the urine, hypertrophy of the prostate, stricture, dysuria and strangury in children. It mentions thirty diseases of the eye, and as liberally of every other organ of the body. Speaking of maternity, it gives methods to induce abortion, to prevent abortion, to replace a prolapsed uterus, to deliver a woman, to deliver the placenta, to restore the vagina to its normal condition, to prevent retention of urine, and to stop hemorrhage. It also gives instruction in hygiene, deodorizations, fumigations of dwellings, perfumes for women to render odor of the house, clothing and breath agreeable, remedies to destroy insects, reptiles, plant lice, to prevent wasps and mosquitoes from stinging, and to destroy rats and mice.

The toilet also came in for care; no less than 74 prescriptions alone for the hair—washes, dyes, oils and depilatories are given.

In this papyrus is a list of over 700 substances from the animal, vegetable and mineral kingdoms which act as stimulants, sedatives, expectorants, etc.

This valuable relic of medical history

\*Read before the Wayne County Medical Society, April 2nd, 1906.

was taken from between the legs of a mummy in a tomb, in the Necropolis of Thebes.

There is much to be learned from a further investigation. I learn that recent exploratory research in the east has added valuable evidences of a high state of culture in other lines than medicine, which goes to bear out the truth of the evidence evolved from the Papyrus Ebers.

The Bible is said to cover 4000 years B. C. The Ebers Papyrus claims 7000 years B. C. Let us see, by the comparison of a few facts gleaned from the Bible, if we can bear out the evidence brought forth by this more recent discovery.

It is generally conceded that Moses wrote the Pentateuch and the first five books of the Old Testament. How many, if any, collaborators he had may probably never be known, but the books contain some wonderfully clever sayings, and if read with a scientific eye, tracings of much value may be learned from them. The education of the Mosaic period was of a high order. The papyrus period antedates the Mosaic by 3000 years. The findings in the Necropolis of Thebes and elsewhere, further bear out the facts asserted by the Papyrus Ebers.

Let us quote a few Bible sayings for scientific comparison. Genesis contains, perhaps, the only true solution of the vexed question of the determination of sex. It is so simple an enigma, so ambiguous, that scientists have overlooked a world of knowledge clothed in a riddle of language. Listen—"and God said let us make man in our own image, after our own likeness; and God created man in his own image, male and female created he them." Here we have *male* and

*female* spoken of long before Adam was put to sleep and woman made. Is it not opportune to reason backward from this enigma and conclude that in the male lies the determining selection of sex?

Scientific research has lately determined a fact of much importance upon which probably hangs the further elucidation of that vital point—the selection of sex. Fischer and Ostwald, of San Francisco, have evolved some striking features of fertilization in which they point out the division of the spermatozoön on contact with the ovum, in which they note the three parts of the spermatozoön—the head, body and tail—the tail piece lasting only until perfect contact of the head and body pieces, after which it is detached and thrown off before an astrosphere is produced, the astrospheres start from the middle piece, while the head piece swells markedly to form the male pro-nucleus. Further investigation will probably demonstrate the vexed question which it is fair to predict was better understood by the Mosaic people, who covered their wisdom under an enigmatical wording to preserve their ideas for us when our intellects are capable of delving into creative radiations.

Again—were these early writers acquainted with anesthesia, if not, why speak of the *deep sleep* of Adam while surgical work was being done of extracting a rib to make woman? These enigmas of the ancient writers if we understand them correctly, might reveal to us a storehouse of wisdom and help solve many apparently difficult problems. If we deny the inspiration of the Bible, and many do, it adds increasing interest to the writings and makes our curiosity keener and our admiration greater for the men who wrote the wonderful



thoughts that have been conundrums to the wise and foolish of past ages.

If the Old Testament owes its authorship to *man*, not plenary inspiration, then we must concede to its authors a wisdom superior to any of the present age, and grant there is nothing new under the sun. Again—was Moses acquainted with the germ theory? If not why did he purify his tents when beset by the plague (typhoid fever)?\*

Did Moses understand prophylaxis? Let us quote his writings. Deuteronomy 23-13, "And thou shalt have a paddle upon thy weapon, and it shall be, when thou wilt ease thyself abroad, thou shalt dig therewith, and shalt turn back and cover that which cometh from thee." Why this prophylactic precaution if he did not understand the use of it in dispersing disease? Is there today any known better general prophylactic? At the time of this particular event in the life of Moses, he had an army of over 600,000 soldiers and a following of over one million and a half, camping on the field of battle, and they had been so camping for decades. Have we forgotten the state of our camps and consequences, during the Cuban war? Had we used the *paddle*, many soldiers would have been living and our reputation for superior germ destroying knowledge spared a jar. Need we wonder, looking toward Cuba, that the Japanese refused our surgical aid during their recent war?

The fact that Moses, a Jew, knew how to reduce gold to a powder, miscible with water and by this means potable,

explains his knowledge of chemistry, a knowledge only attained by the highest masters of science and art of his day. So far as I know, it was an Egyptian formula, but, it is not strange that Moses should know of it, as he had been raised and educated in Egypt, at the court of Pharaoh. Medical literature in those days was considered sacred and was only open to the priest class and their associates.

Moses lived, as nearly as can be determined, in the fifteenth and fourteenth centuries B. C. His death date is given as 1451 B. C. The Bible is sufficient evidence that the peoples antedating its writing must have been a cleverly educated people. Profane history tells of the arts and sciences of those periods, which is vouched for by relics recovered from ruins, vaults and necropolises; some samples recently excavated of prehistoric times, are most beautiful in design.

On one of the tombs of the Egyptian grandees, which surround the pyramids of Sak Karch, that of Sekhet-enaukh, chief physician of the Pharaoh Sahura, of the fifth dynasty (B. C. 3533), is described how he healed the king's nostrils, for which his majesty wished him "a long life in holiness," and also the compilation of medical works assigned by tradition to one of the most ancient kings, Teta, the successor of Menes of the first dynasty. Menetho, the Egyptian priest and historian, tells us that this king wrote treatises on anatomy and surgery and performed surgical operations with flint flakes.

\* About 3300 B. C., in the reign of Cheops, during the building of the great pyramids, a medical papyrus, containing anatomy was found by a priest in a temple. We also know that the Egyptians

\*The term plague is now regarded as typhoid fever and is so rendered in late Bible translations. The mode of clearing their tents was much as at present, using slightly different words to express the same act. They used the expressor, "purify," while we use "fumigate." They used "incense," we use "antiseptics." Their incense was made of antiseptics, viz: stacte, galbanum, eucalyptus, and frankincense; onycha was a combination of antiseptics used at the time of this plague and long prior to it.

practiced embalming for over 5000 years B. C., and their process surely necessitated a knowledge of anatomy, therefore, it is reasonable to believe that this ancient people knew the structures of the body.

Pliny tells us that the Egyptians examined the bodies after death, to ascertain the nature of the disease of which they died. The Egyptians did not shrink from human dissections, consequently the study of anatomy was a matter of course.

In the present age it is a common custom among the people to have a medicine chest in their homes. We note that history gives the same custom among the ancient Egyptians, one such case having been found B. C. 2500, in the tomb of the wife of the Pharaoh Mentu'hoteps of the 11th dynasty. It was enclosed in a basket of straw-work, walled in a stone casing. It contained six cases, one of alabaster and five of serpentine, with dried remnants of drugs, two spoons, a piece of linen cloth and some roots.

The Bible contains many allusions to physicians and surgery. Joseph commanded his physicians to embalm his father. The terms, eyelids, apple of the eye, sinews, bones, abscess, inflammation, fever, etc., all going to show a familiar acquaintance with disease and remedies.

Apothecary and prescriptions are mentioned in Exodus 30:35. It says: "And thou shalt make it a perfume, a confection, after the art of the apothecary." Nitre and soda are spoken of in Jer. 2:22, showing a knowledge of chemistry.

Profane history abounds in evidence of a high state of medical as well as scientific education and arts. As corroborative evidence of a high state of med-

ical and surgical education we have the Egyptian monarch Nakhpsus, of Sais, 700 B. C., who wrote on medicine. Homer describes the Egyptian physicians as the "sons of Pæon skilled above all men." In the Third Book of Herodotus is the following passage: "Cyrus sent to Amasis, B. C. 500, and bade him for an oculist, the best in the whole land of Egypt." Darius also sent hither for a body physician, and in the time of Liberius and Nero, Egyptian physicians regularly came to Rome, usually to heal skin diseases. The science of medicine among this ancient people was in the hands of specialists, who were called *Snu*. Homer, and later Herodotus, tell us that there was a specialist for each single disease, and what records we now possess of the Egyptians, after thousands of years of continued destruction, corroborate the latter, when he says "Egypt swarmed with physicians." They concealed their medical knowledge under the most mysterious formulas, much, perhaps, as we do today in prescription writing. The Egyptian physicians were noted ophthalmologists. All physicians of that period were required by law to use the prescribed remedies, showing there was a law governing the ethics of medicine at that early date. Thus, we find, from a thorough search for evidence, of the existence of our profession in the past. We have a continued history of Egypt for 5000 B. C., a prehistoric account of 2000, and a continuous culture known to us for 2000 more, hence a connected history extending over a period of 9000 years.

While I am writing these facts, Dr. J. P. Peters, of New York, is delivering a lecture in this city in the Museum of Art, on his expedition to and explora-

tions of Babylon, 1888, entitled "The Newest Discoveries in Babylon," in which he corroborates the Ebers Papyrus by a statement that civilization dates back over 7000 years. Thus we have learned that thousands of years before Christ there were learned men in Egypt who could make intelligent observations of disease, combine complicated prescriptions and use them with judgment.

A period of great importance has been that included from the manhood of Moses about 1550 B. C., to the present, extending over 3500 years. We shall cover a small portion of this time as speedily as practicable.

Among the great institutions of learning of this period is Alexandria, founded by Alexander the Great, B. C. 332, and which for many centuries held the sway in learning.

Here during the reign of Ptolemy Soter, dissections of the human body was permitted. Here it was that the two celebrated physicians, Herophilus and Erasistratus, became famous by anatomic discoveries, among which were the coverings of the brain, the ventricles of the brain, the accurate study of the eye, and the greatly improved operations for cataract. Increased knowledge of anatomy lead to greater advance in surgery. From the Alexandrian period up to 640 A. D., education, particularly medical, made rapid strides. Specialists of every branch and every man abiding by his own specialty, was in vogue. Dentistry, also, flourished at this period.

Aetius, of Amida, a Byzantine, is said to be the first physician in this period who mentioned diphtheria with allusion to paralysis of the palate. Paul, of Aegina, was one of those remarkable men whose ideas are centuries ahead of

their times. He was essentially a surgeon. He advocated amputation of the breast for cure of cancer and extirpation of the uterus.

Avicenna, called the prince of physicians, of Arabia, was noted for the discovery of the contagiousness of pulmonary tuberculosis.

Arnold, of Vallanova, Peter, of Abano, of the 13th century, both great men of their period, had to flee their homes to save their lives from the persecutions of the church, nevertheless, their persecutors burned their bones for heresy, because they dared to believe that natural causes, not spiritual, produced disease. Arnold revived the search for some anesthetic for surgical purposes. He used inhalations of mandagara, opium, henbane and hemlock, by soaking a sponge in warm solution and inhaling fumes thereof.

All through the early middle ages, dissections of human bodies had been forbidden and it was not until the close of the 13th century that physicians were permitted, by order of the king, to dissect at least one body every five years. Still the religious zealots, whose zeal dethroned their better judgment, strove to stay the onward progress of science but, in the 14th, 15th, 16th and 17th centuries, right prevailed and the benefit to humanity is today evinced by the marvelous results of surgery of our period.

Another fact that bears strong evidence in favor of a spirit of advancement in medical knowledge, in these centuries, is the efficient hospitals and the liberal manner of the support of the same.

Lady Seidel, A. D. 918, opened at Bagdad, her hospital, endowing it with 300 pounds sterling per month. In 977, Emir-Adad Adaula, also erected an enor-



mous institution, with a medical staff of 24 officers.

By the end of the 12th century there were sixty medical institutions in Bagdad alone, free to all patients and supported by official charity.

The Mansuri Hospital at Cairo, eclipsed all others so far erected, and the yearly endowment was \$125,000. Each patient, on leaving this hospital, was handed some pieces of gold coin that he need not work until fully restored to health. A novel feature of this hospital was the large halls, one in which music

was played day and night, to sooth the melancholians; one where religious readings and prayer were kept up constantly by a staff of fifty chaplains; one hall for story telling. Fountains were in each court, and there were lecture halls and isolation wards for contagious diseases.

Thus, looking backward, from the present to the earliest periods of history we can trace the mental calibre of the ages from the perfect man Adam to the relics of today.

Note.—I wish to acknowledge my indebtedness to Carl H. Von Klein, M. D., of Chicago, for extracts from his valuable translation of the Ebers Papyrus; also Fischer & Ostwald, San Francisco, on Fertilization.

## THE PRINCIPLES OF TREATMENT OF CORNEAL ULCERATIONS.\*

CALVIN R. ELWOOD, M. D.,

Menominee.

"Ulcerative keratitis is a manifestation of an infection which is permitted to gain access to the tissues through breakage in the corneal epithelium. The objective symptoms vary with the extent of the tissue involved, the virulence of the infection and the ability of the tissues to resist. The subjective symptoms vary with the extent and location of the tissues involved, the virulence of the infection and also with the general condition and temperament of the patient."—Bulson.

The affection is recognized by the loss of transparency of the corneal tissues and the presence of a grayish or yellowish infiltrate of the ulcerated area. The visual impairment is very slight if the ulcer is peripheral, but greater, the nearer the ulcer is to the pupillary area. It must be borne in mind that the corneal ulceration is repaired by the formation

of scar tissue which is not transparent and that consequently there is sure to be some impairment of vision after the healing of an ulcer, any part of which is located within the pupillary area. This impairment will often be much greater after treatment is discontinued than during treatment, as atropin is generally used and with a dilated pupil the patient can see around the cicatrix better than after the pupil has assumed its normal size. The majority of cases of corneal ulceration are complicated with a greater or less amount of iritis and conjunctivitis.

The most common form of corneal ulceration is the result of simple traumatism. The denuded area, at first transparent, may become covered with a grayish infiltrate and if infection occur the ulcer extends. The superficial and

spreading ulcers, designated as mycotic keratitis, are often difficult of recognition. I was called recently to see a patient who, several days previously thought he had gotten a cinder in his eye. Careful examination of the lids and cornea did not reveal a foreign body and oblique illumination showed no break in corneal epithelium. Symptoms, however, were rather pronounced and a drop of fluorescein was instilled which revealed a considerable area of discoloration. With this conclusive evidence of destruction of the corneal epithelium I advised the patient to give the eye careful treatment for a few days. He declined and subsequently consulted another oculist who told him there was but a slight inflammation of the lids. It took me nearly six weeks to convince this individual of the correctness of my diagnosis and by that time the ulcer, although superficial, had spread over so large an area that frequent phenol cauterizations were necessary. This case, as many others, has demonstrated to my satisfaction the great diagnostic value of fluorescein.

Should an ulcer become infected, it is liable to extend both in area and depth, to be complicated by iritis and sometimes cyclitis and there will be noticed an accumulation of matter resembling pus in the anterior chamber. This condition, known as hypopion, is not pus but an accumulation of fibrin and leukocytes from the vessels of the iris and ciliary body. It may, however, become infected from without in case of perforation of the cornea, in which event panophthalmitis is liable to develop.

Corneal ulceration may result from foreign body, everted eye-lash or erosion from injury. It may occur without external cause in those of impaired vital-

ity through disturbance of nutrition, particularly in a child of strumous diathesis. Owing to the possibility of all simple ulcers becoming infected and our limited knowledge of the virulence of the various infectious processes, it is wise to consider every case of corneal abrasion carefully. When one considers the large number of emery particles and other foreign bodies which are removed under the most septic conditions by fellow workmen, and the various other conditions which favor corneal infection, it is surprising that so few simple epithelium abrasions become infected. When the simple ulcers become infected, the ulcerative area presents a yellowish point surrounded by a zone of infiltration and with a tendency to increase in size and depth. A sloughing ulcer is the most virulent of all. It may arise from the most trivial injury, spread rapidly and frequently results in complete destruction of the cornea. The serpiginous ulcer of Saemisch, a type of this form of ulceration, is the result of pneumococcus infection and frequently results in complete destruction of the cornea. Corneal ulcers of any character should be treated on strictly surgical principles. In the case of foreign body in the cornea, the eye should be bathed with boric acid, 1-5000 bichlorid, 1-3000 formaldehyde or similar antiseptic solution, carefully cleansed and it is usually better if argyrol be instilled afterward, or if the foreign body was very probably septic, it is wise to take the additional precaution of touching the surface with pure formaldehyde or tincture of iodine.

If, notwithstanding these precautions, the ulcer become infected, the most careful attention should be given to cleanliness and the removal of all possible

sources of further infection. Irrigation with boric acid solution or 1-5000 cyanid of mercury should be employed several times daily. If there is any secretion, 20 to 40 per cent argyrol solution, twice or three times daily, should be used, and in the more serious cases the infection is best checked by the application of the galvanocautery. This is one of the most valuable, but at the same time most dangerous, ophthalmic instruments, its use is certain to result in the formation of corneal opacity, and for that reason must not be used when it can be avoided. Before the employment of the galvanocautery, fluorescein should be instilled, and only the discolored area destroyed. It is of interest in this connection to note that after the application of cocain, fluorescein will stain a much larger area than before as the result of the dessicating effect of cocain upon the epithelium.

No little skill, the result of experience, is necessary in the use of the galvanocautery. It is my practice to use a small pointed electrode or the rounded tip suggested by Dr. Knapp, heated only to a dull cherry red, with interrupted and delicate applications. Cauterization should be carried to the healthy tissue only. Great care must be exercised that the electrodes be heated to only cherry red, as no less expert surgeon than Herman Knapp reports a case of cataract in a 14-year-old boy, which he is convinced resulted from overheating of the aqueous, from too hot a corneal cautery electrode. The method formerly advised by him of perforating the corneal ulcers with the electrode, I have seldom followed. During the past year I have had but two cases in which I thought perforation justifiable. In these there was severe infection, a large hypopion filling

almost one-half the anterior chamber and the condition was complicated by marked cyclitis. The perforation of the base of these ulcers resulted in the discharge of the hypopion through the opening formed, almost instant relief from severe pain and satisfactory convalescence. It, however, also resulted in the formation of a dense central corneal opacity, but this under any conditions, would have been unavoidable, as the ulcer extended almost through the substantia propria to Desmet's membrane. In these cases I feel that perforation was perfectly justifiable, as without such heroic measures the area of infiltration would almost certainly have extended with increased scar and the possibility of intraocular complications, whereas, now an optical iridectomy promises serviceable vision. Should the ulcer become dormant, corneal repair may be hastened by the application of tincture of iodine. This has a desirable stimulating and antiseptic action that is of great value. Phenol cauterization is especially indicated in corneal ulcers of the mycotic type. In these conditions it has been a matter of much satisfaction to me to stain the ulcer with fluorescein and gently touch this area with a pointed tooth-pick moistened with pure phenol. The next day it will be found that only a portion of this area will stain, and to this region the application may be repeated. My results from phenol cauterization have been disappointing in deep ulcerations.

Subconjunctival injection of the cyanid of mercury is highly endorsed by Darier, of Paris, by Bulson, Gifford, Fox and others in this country, in the more serious infected central ulcer with hypopion. Darier's high standing demands



careful consideration of any form of treatment which has such enthusiastic endorsement as the following: "When one must combat an infection, acute or chronic, primary or secondary, arising from the outside by an erosion of the cornea, or a serious traumatism, or from the interior by a reflected or ametastatic infection, (as from syphilis, rheumatism, tubercle, etc.) subconjunctival injections of cyanid of mercury furnish us with a most active and rapid means of stopping the morbid local process, often even after general treatment has failed or acted too slowly." These injections are employed in the serious infectious cases, in which because of location or for other reasons, galvanocauterization is not desirable. The formula employed is usually the following: Cyanid of mercury 1 centigram, sodium chlorid 1 gram, aqua distill q. s. to 50 grams, injected under the conjunctiva. If to this preparation is added 1/12 of 1 per cent of cocain, the injection is practically painless. My experience with subconjunctival injections, except in hospitals during post-graduate study, has been limited, but I shall certainly try it when proper indications arise. In one case seen in consultation, I believe it checked the destructive process in a serpentine ulcer, when all other methods had failed. Darier attributes its benefit to antiseptic and lymphagogue action.

Probably the most valuable recent addition to the armamentarium of the oculist is dionin, a morphine derivative, analgesic and lymphagogue in its action, and in the treatment of corneal ulcers of great service. I am in the habit of using it in 10 per cent solutions, employed two or three times daily. What effect is obtained is usually during the

first 72 hours, as after prolonged use it is inert. When first employed the effect of dionin is sometimes startling. Such excessive chemosis may result that the conjunctiva will protrude between the lids. This, however, is not painful, and soon subsides, giving the patient greatly increased comfort. As an anesthetic for cauterization, curettement, etc., of corneal ulcers, cocain is inferior to holocain. The former dessicates the epithelium, may cause some exfoliation of the epithelial cells, and is not in the least antiseptic as is holocain. The latter does not have the dessicating effect, and the anesthesia is quite as lasting and complete.

The employment of the occlusive bandage and in carefully selected cases, the pressure bandage in corneal ulcers is of undoubted value. It protects the corneal surface from particles of dust which normally are removed by the action of the lids, but if there is any depression resulting from the ulcer, this is liable to be a receptacle for such foreign bodies, thereby delaying repair and favoring infection. The dry bandage is to be preferred to the moistened one, as it is more satisfactory in removing conjunctival secretions. Should there be an excessive purulent secretion, as in the corneal complications of ophthalmia neonatorum, the excessive secretion is a contraindication to the occlusion bandage, as it will retain the secretion within the conjunctival sac. In such conditions very frequent cleansings are of vital importance. Should the corneal ulcer be very deep and threaten perforation, this accident may be avoided by a carefully applied pressure bandage, the pad being very accurately arranged to make up for

the irregularity of the surface over and about the eye.

Argyrol and protargol to combat the complicating conjunctivitis are superior to nitrate of silver as formerly used, as the silver is liable to be deposited upon the surface of the ulcer, and is very irritating, while argyrol is not so in the least, but is antiseptic and stimulating. It is claimed that argyrol becomes somewhat inert after standing more than two weeks—it is certainly less irritating in fresh solutions. The stimulating and soothing effect of hot applications is of value, but must be used with caution. In my earlier practice, I am convinced that I used the hot compresses too much, interfering, as is claimed by some authorities, with corneal nutrition.

Should a case of corneal ulceration be complicated with obstruction of the lacrymal duct, this condition must receive energetic treatment, as secretion therefrom is usually infectious. When complicated with dacryocystitis energetic treatment of the latter condition must be employed. If acute, dilatation of the canal with a suitable probe, followed by irrigation with argyrol or protargol, is indicated—if profuse or chronic, extirpation or obliteration of the sac may be necessary. Dr. Casey Wood meets this condition satisfactorily, in emergency cases, by ligating the canaliculi. When stricture of the nasal duct is present, the employment of various disinfectants to the nasal mucous membrane is now more employed than formerly, and in my own practice I have met with cases where the use of some mild alkaline nasal douche has greatly favored the repair of corneal ulceration.

During the acute stages, comfort is greatly increased by the additional use

of some mild, soothing ointment within the conjunctival sac and if repair is hastened later with a stimulating ointment, it does much to lessen corneal opacity. Stimulation by the insufflation of powdered calomel or iodoform is heartily praised by some authorities, but I have had little experience with it, believing that we have other methods of greater value.

Atropin is usually positively indicated both because of its specific effect on iritis and its value as a splint to the injured eye, putting it at rest. The danger of glaucoma must, however, be considered in patients above 50 years of age and in peripheral ulcers, or in any variety where there is unusual intraocular pressure, myotics may be of more value than mydriatics. I have under observation a patient whose treatment has required careful consideration of this condition; a man, 70 years of age, consulted me during the second week of corneal ulceration, complicated with symblepharon and chronic conjunctivitis, the result of long standing disease. Vision was limited to form perception, tension + 2, deep ciliary congestion and comparatively little pain, but what was present was nocturnal. Fearing glaucoma, I did not instill atropin until the third day, when on account of the contracted pupil, non responsive to light or accommodation, I instilled one drop of a 1 per cent solution. During the next 12 hours, the pain suffered was agonizing, and the possibility of exciting a sub-acute glaucoma was forcibly impressed upon me. As what mydriasis there had been revealed numerous synechiæ, I concluded it was easier to combat glaucoma, uncomplicated with adhesions, and continued the atropin. After the liberal

employment of all analgesic measures at my command and the liberation of the synechiæ, the patient became quiet and rapidly improved. Had this case been glaucoma I would have had some excuse, for vision was impaired out of all proportion to the corneal trouble, and the contracted pupil and turbid media made ophthalmoscopic examination impossible. Had atropin not been used when it was almost complete, posterior synechiæ would have resulted with very tedious convalescence and probably a chronically painful inflamed eye. I know of no medical question requiring more careful consideration than these contradictory indications for a mydriatic or myotic, a mistake being disastrous in either event.

For the absorption of the cloudiness resulting from corneal ulceration, thia-sionin has been proven by Suker, Melville Black and others to be of value, if Desimet's membrane is not involved. It is given in hypodermic injections or in 3-grain capsules, twice daily. This line of medication must be continued for several months before much benefit is derived, and owes its beneficial effect to increased leucocytosis.

In conclusion, I would say that cor-

neal ulcers should be treated largely on surgical principles, keep the ulcers clean, the eye at rest with atropin, if infection is present sterilize with the galvano-cautery, phenol, solution of cyanid of mercury, formaldehyde, tincture of idoin or such antiseptic as seems indicated. Stimulate repair with yellow oxid or iodoform ointment, hot boric acid compresses, dionin, etc., and protect the eye from further infection with the occlusion bandage, if there is only slight purulent discharge. The darkened room in the management of these cases is a relic of barbarism, depresses the patient, and has a tendency to impair his recuperative powers.

The successful oculist must ever bear in mind that the eye is but a part of a delicate organism, and to be successful must consider all physical conditions which might retard convalescence. If there be disease of the lacrymal apparatus or nasal mucous membrane, correct this by judicious probing and irrigation and antiseptic sprays and douches.

Hygiene, diet and systemic measures are of great importance. Struma, anemia and other dyscrasia must receive proper attention.

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**The Russian Red Cross.**—John Van R. Hoff says that the Russian Red Cross has a great social standing. Its members embrace a great number of the people, from the royal family down. Its organization extends widely throughout the country. It has a large income and during the war it did most commendable work. For purposes of administration it is organized into four grand subdivisions. The regulations governing it apply as well to times of peace as to those of war. The specific objects of the society during active operations are as follows: To supply women nurses, and, if necessary, physicians to the military medical establishments; to supply medicines, surgical instruments and dressings, warm clothing, and so on. To furnish hospital stores, and

delicate food not included in the supply table of the medical department. To assist in the evacuation of the invalids by supplementing the physicians, trained nurses, and orderlies on duty with railroad ambulances and boats, besides supplementing the regular supplies; to aid through the local organization the sick sent into the interior of the country, for which purpose it keeps a record of all hospitals and other medical institutions in the region, and if necessary, establishes mobile hospitals in which the sick are cared for at the cost of the government, the rate being fixed by the Minister of War. The writer concludes by warmly praising the work of this society.—*Medical Record*, May 19, 1906.



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JULY, 1906

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### Editorial

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The Jackson Meeting was characterized by Unity, Peace and Concord. There has seldom been a session of the State Society at which good fellowship was more apparent than at Jackson. The local profession had left nothing to be desired in the way of arrangements. No detail was too small to be overlooked; none too large to be splendidly achieved. There was that cordiality about the reception tendered by the Jackson Society which at once made the visitors feel at home and the good feeling was noticeable throughout the session. The evening before the first meeting, there was an informal reception, on Wednesday evening a masterful address by Doctor Murphy of Chicago, followed by dancing, and on Thursday evening a most enjoyable and elaborate entertainment by the ladies of Jackson. Excellent music and a clever one-act play were features. Special entertainments for the visiting ladies included an automobile ride, a trip through the prison and a trolley ride to Wolf Lake.

The full proceedings of the Council, House of Delegates and General Session will be published next month.

At the close of a notable address on Education, Doctor Inglis recommended that a special Committee on Education

be appointed to co-operate with the regular committee of the American Medical Association. Provision for this was later made by the House of Delegates.

Other standing committees were created for the study and prevention of tuberculosis and for the study of the conditions under which fraternal and lodge practice are done.

The Legislature not having been in session this year, the Committee on Legislation had little to report. The work of the National Legislative Council was reviewed by the Michigan member. Doctor Carrow, the facts being given concerning the pure food bill, the army reorganization bill, the fight against nostrums and the establishment of a Department of Health in the President's Cabinet.

Important resolutions were passed and referred to the Committee on Legislation and Public Policy, one denouncing the prevalence of criminal abortion and the other recommending that the laws of the state should be so modified as to encourage the more general application of the tuberculin test to cattle, by providing satisfactory compensation for the cattle destroyed. Another important resolution passed was that condemning the lowering of the fees for life insurance examinations.

Resolutions expressing the appreciation which the Society feels for the splendid work accomplished by its former President and former Chairman of the Council, Dr. Leartus Connor, were adopted. A special appropriation was made for and a committee appointed to provide a suitable token of appreciation for the retiring Secretary, Dr. A. P. Bidle.

Numerous but for the most part minor

changes were made in the By-laws, those of importance being in the section relating to the orations. A two-day session was decided upon. An appropriation of \$500.00 was made for the physicians of San Francisco and vicinity.

The following officers were elected: President, Dr. C. B. Stockwell, Port Huron; Vice-Presidents—Dr. William Fuller, Grand Rapids; Dr. E. T. Abrams, Dollar Bay; Dr. D. E. Robinson, Jackson; Dr. A. R. Stealey, Charlotte.

The 1907 meeting will be held in May, at Saginaw.



**The Crusade against Tuberculosis** has made such immense strides that the working man of today has more knowledge of its infectiousness and its prevention, than was possessed by the educated man of twenty or even ten years ago. The fight against the white plague is now world wide and every civilized country has associations whose object is the spreading of knowledge of methods of prevention and cure. This fight has been by no means in vain. In Prussia, the death rate has been reduced one-third, in the city of Stockholm it has been reduced 40 per cent, and in New York city 30 per cent.

In this fight, America has not lagged. There are now no less than fifty anti-tuberculosis associations among the laity in the United States, and at least five in Canada.

Michigan has not been as prominent in this work as she should have been. A good, if tardy, beginning has been made, but the work should be pushed in every county in the state. The stimulus for this work must come from the pro-

fession and should be under the control of a committee, in order that the work may be centralized. For this purpose, the following action was taken at Jackson:

*Whereas*, the study and prevention of tuberculosis is one of the greatest problems to be faced and solved largely through the agency of the medical profession, therefore,

*Be it resolved*, that a permanent committee, to be known as the Committee on the Study and Prevention of Tuberculosis be established by the Michigan State Medical Society, said committee to consist of five members to be appointed by the President of the Society. The duties of said committee shall be to report annually, and from time to time, through the columns of the State Medical Journal, on the year's progress along the lines of study, prevention, treatment and cure of tuberculosis, together with economic and sociologic aspects of the disease; to place this information before the county medical societies; to co-operate in every way possible with national, state and local societies and associations for the study and prevention of tuberculosis, and with all local, state and national Boards of Health, to secure the attainment of the same ends—the prevention, relief and cure of tuberculosis.

The names of the committee will be announced later. Every part of the State will be represented. When the members of the committee are announced and work is begun, every member of the State Society should give his hearty support in this important work.



**The Sum of Five Hundred Dollars** from our treasury was appropriated at Jackson for the relief of the medical profession in and about San Francisco. This was immediately sent on through the American Medical Association.

The doctors out there need it. The fire swept away all of the office buildings in which many of the profession had their offices—books, records, instruments, furniture—all disappeared. In

addition, many also lost their homes. For the builder, the business man and the laborer there are work and money to pay for the work. For the professional man there is work, but for months, there will be little financial reward.

The first number of that excellent State Journal, the *California State Journal of Medicine*, which appeared after the calamity, is a pathetic little sheet, but it gives ample evidence of the spirit and virility of its editor. All its property has disappeared and as the editor says, the editorial office is under the editor's hat—the only covering he has left. But Doctor Jones' humor does not desert him. He says that the gentlemen who have threatened to sue the journal might now proceed and get a judgment on the pall of smoke which still hangs over what was once the property of the paper. The State Society was in session in San Francisco on the eventful day. Dr. Jones remarks that "this session will remain the one most generally remembered." We are glad to add our mite to help our transcontinental brothers get on their feet again.



**The Three Day Session of the Society** was inaugurated at Grand Rapids in 1904 and carried out at Petoskey and at Jackson.

There are several objections to the three-day session, which experience has proven. Few members come at the beginning and remain throughout the session. The mornings, except for the president's address and the orations, are practically wasted, and much of the scientific part of the program—the most important part—comes toward the end

of the day when every one is tired, especially when the weather is as hot as it was at Jackson. Then, too, it is a strain on the local profession to entertain for so long a period, although, be it said, there has been no outward evidence of this.

The Society hereafter will have a two-day session. The Council will meet in the afternoon, and the House of Delegates in the evening previous to the opening session. The first morning will be given up to the president's address and matters of general interest. Sections will be held in the afternoon of the first day and in the morning and afternoon of the second day. A short general meeting will take place at noon on the second day. The orations will be omitted.



**The Fees for Life Insurance Examination** have been pretty thoroughly discussed in the medical journals during the past three months, so that the issues at stake are well understood by the profession. The reduction from \$5.00 to a "graded system of fees," as it is termed by the companies, but which is virtually a flat \$3.00 fee, was sprung on the examiners at a time when united dissention was impossible. Since then most of the State Societies have met and loud has been the protest thereof.

The matter was brought up at Jackson by the delegates from the Muskegon-Oceana and Washtenaw Societies, both of which have pledged their members not to accept the reduction.

The following resolutions were adopted:  
*Whereas*, Many of the Life Insurance Companies have notified their medical examiners of



a reduction of the examining fee from \$5.00 to \$3.00 and

*Whereas*, We, as physicians, realizing the responsibility incident to proper examination of the individual, believe such reduction to be unjust, therefore, be it

*Resolved*; That the House of Delegates, in session assembled, does hereby declare such reduction to be unjust, and respectfully requests that no physician legally authorized to practice medicine in Michigan, accept such reduction of fees.

*Resolved*, That it is the sense of the House of Delegates that hereafter in such examinations for life insurance, the minimum fee shall be \$5.00.

*Resolved*, That the several component societies forming this State Society, be requested to adopt these resolutions.

*Resolved*, That a copy of these resolutions be mailed to the several life insurance companies that have reduced the fee from \$5.00 to \$3.00.

At Boston a committee of five was appointed to consider all the questions of insurance matters and their adjudication, in order that the rights and dignity of the profession may be maintained.



**The Boston meeting of the American Medical Association** was the largest ever held. The exact registration figures are not at hand at this writing, but it is probable that over four thousand, five hundred members were in attendance.

The meeting was notable in several respects. More distinguished members of the profession from abroad were present than ever before—among them, Dührssen, von Rosthorn, Trendelenburg and von Frey from Germany, Fenwick and Ballance from England. The clinical and pathological exhibits, placed in the new Harvard Medical School building, were extensive and interesting beyond

precedent. The Sections were successful, in point of the excellence of the papers and discussions as well as in point of attendance, as never before. Another notable feature was the co-operation of the members from New York State, who have been so long without the fold, on account of the unfortunate dissention in that state, now happily settled.

The new President of the Association is Dr. Joseph D. Bryant of New York and the next session will be held at Atlantic City.

Each year it is more apparent that none of us can afford to miss the annual meeting of the Association.



At the Jackson meeting there seemed to be some confusion as to whom certain matters relating to State and National Legislation should be referred. All such business should be submitted to the Michigan member of the National Legislative Committee of the A. M. A. (Dr. Flemming Carrow, Detroit). He will in turn submit it to the Auxiliary Legislative Committee, composed of one member from each County Society, and they will see that it is brought before our State or National Legislators, as the case may require. A report of the year's work is presented to the State meeting at its first general session each year. Let it therefore be understood that all medical matters requiring State or National Legislation will have proper consideration if presented through the usual channel, that is, to Dr. Flemming Carrow of Detroit, Michigan member of the National Legislative Council, or to any of the following members of the

## National Auxiliary Congressional and Legislative Committee for Michigan.

Alpena.....	A. J. Wilkinson.....	Alpena
Barry.....	G. W. Lowry.....	Hastings
Bay.....	A. W. Herrick.....	Bay City
Benzie.....	C. P. Doyle.....	Frankfort
Berrien.....	Orville Curtis.....	Buchanan
Branch.....	Samuel Schultz.....	Coldwater
Calhoun.....	L. S. Joy.....	Marshall
Cass.....	James Baird.....	Dowagiac
Charlevoix.....	L. M. Kanagy.....	Charlevoix
Cheboygan.....	Chs. B. Tweedale.....	Cheboygan
Chippewa.....	John R. Bailey.....	Mackinaw Island

Clinton.....	M. Weller.....	St. Johns
Delta.....	H. M. Long.....	Escanaba
Dickinson and Iron.....	Wm. H. Vernboer.....	Norway
Eaton.....	P. L. Thompson.....	Grand Ledge
Emmet.....	J. E. Reycroft.....	Petoskey
Genesee.....	H. R. Niles.....	Flint
Gogebic.....	J. C. Yates.....	Ironwood

Gd. Traverse-Antrim.....	Howard B. Garner.....	Traverse City
Gratoit.....	G. S. Browning.....	Alma
Hillsdale.....	Burt F. Green.....	Hillsdale
Houghton.....	A. B. Simonson.....	Calumet

Huron.....	D. J. McColl.....	Elkton
Ingham.....	L. Anna Ballard.....	Lansing
Ionia.....	F. W. Bradley.....	Saranac
Isabella.....	P. E. Richmond.....	Mt. Pleasant
Jackson.....	Chas. S. Lewis.....	Jackson
Kalamazoo.....	O. H. Clark.....	Kalamazoo
Kent.....	F. J. Lee.....	Grand Rapids
Lapeer.....	H. E. Randall.....	Lapeer
Lenawee.....	D. L. Treat.....	Adrian
Livingston.....	R. H. Baird.....	Howell
Macomb.....	J. M. Croman.....	Mt. Clemens
Manistee.....	W. K. Branch.....	Manistee
Marquette and Alger.....	H. J. Hornbogen.....	Marquette
Mason.....	W. H. Taylor.....	Ludington
Mecosta.....	A. A. Spoor.....	Big Rapids
Menominee.....	P. J. Noer.....	Menominee
Monroe.....	Geo. F. Heath.....	Monroe
Muskegon.....	J. F. Denslow.....	Muskegon
Newaygo.....	F. H. Brown.....	Newaygo
Oakland.....	William McCarroll.....	Pontiac

O., M., C., O., R., O., S., N.	Insley.....	Grayling
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Osceola.....	E. S. Richardson.....	Reed City
Ottawa.....	Henry Kremers.....	Holland
Saginaw.....	H. B. Howe.....	Saginaw
Sanilac.....	G. S. Tweedie.....	Sandusky
Schoolcraft.....	E. B. Patterson.....	Manistee
Shiawassee.....	A. M. Hume.....	Owosso
St. Clair.....	C. B. Stockwell.....	Port Huron
St. Joseph.....	L. K. Stote.....	Constantine
Tuscola.....	W. C. Garvin.....	Millington
	N. A. Williams.....	Bangor
Washtenaw.....	D. M. Cowie.....	Ann Arbor
Wayne.....	E. S. Sherrill.....	Detroit

We regret to announce the resignation from the Journal staff of Dr. H. S. Olney who has been connected with the editorial department, first conducting the department on pathology and bacteriology and later that on internal medicine. Doctor Olney has left Detroit and will reside in Pueblo, Colorado. Hereafter, the department of medicine will be conducted by Dr. T. B. Cooley.

## Book Notices

**Diseases of the Nervous System Resulting from Accident and Injury.**—By Pearce Bailey, A. M., M. D., Clinical Lecturer in Neurology, Columbia University, New York City; Consulting Neurologist to the Roosevelt, St. Luke's and Manhattan State Hospitals, etc. Cloth; 627 pages. D. Appleton & Company, New York, 1906.

This is a slightly different title from that of the first edition of this work by Dr. Pearce Bailey, of New York, who has so thoroughly revised the former work that this title was thought the more correct one.

There is no more fertile field for the malingerer to experiment in than that of nervous diseases alleged to be due to injury, and while the ignorance which commonly underlies their brazen claim is not infrequently their own undoing, yet it is remarkable how shrewd and persistent some of these pretenders are in their efforts to mulct corporations.

There are, of course, many nervous lesions actually the result of bona fide injuries and a work treating definitely and authoritatively of those lesions, which may have their cause in traumatism, is especially valuable to those having frequently to do with medico-legal questions as well as to the surgeon and the neurologist. Such a book is this one from the pen of Dr. Bailey, who speaks from large experience.

He first takes up the general consideration of the case, e. g. the previous history of the patient, the history of the accident, the physical evidences of predisposition to nervous diseases and then the examination for the actual injury.

This section is followed by a discussion of the organic effects of injury to the nervous system, the functional effects of injury, and medico-legal considerations, laying more emphasis upon the

remote than upon the immediate effects of injury.

Altogether the work is very readable, and a valuable addition to any library. Paper, print and binding are excellent as is uniformly the case with books from the publishers, D. Appleton & Co.

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**Gynaecological Diagnosis.**—A Manual for Students and Practitioners. By Arthur E. Giles, F. R. C. P., Surgeon to the Chelsea Hospital for Women, etc.  $5\frac{1}{2} \times 8\frac{1}{2}$  inches; 212 pages, with 35 original illustrations. William Wood & Company, New York. 1906.

There is perhaps no field in general medicine, in which the recent graduate finds himself more illly prepared—so far as diagnosis is concerned—than that of gynecology. Most patients suffering from the usual medical and surgical ailments can be examined by a dozen or more students, but the gynecologic patient can furnish material for but two or three. A physician, in most cases, must get his experience in this line from practice and not find his practice upon experience. For these reasons, books on the subject are particularly useful, and for its size, this of Giles' is as good as any of which we know. In it, there is no attempt at the finer distinctions which interest the gynecologist and no desire to present the subject from a pathologic view point. The diagnosis is carried only up to the point to which the practitioner may be expected to go.

In most treatises on gynecology, the order is this: Given a disease, what are its symptoms? In this book, the order is reversed and after chapters devoted to general considerations, leading symptoms are taken up *seriatim*, sub headings giving associated symptoms. Adding to these facts, those obtained by examination, the diagnosis is finally arrived at. After complete consideration of each symptom, tables give the facts and systematize the information for ready reference.

While such a method may lead to errors, it will more frequently than not, lead to a correct diagnosis. The book contains too many facts crowded into a short space to make easy reading, but it is intended as a ready reference book and as such can be recommended.

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**Perjury for Pay.**—An expose of the methods and criminal cunning of the modern malingerer. By Willis P. King, M. D., ex-Assistant Chief Surgeon of the Missouri Pacific Railway System.  $5\frac{1}{2} \times 8\frac{1}{2}$  inches; 312 pages. Cloth, \$2.00. The Burton Company, Kansas City. 1906.

In this little book, the author has collected many of the more interesting cases of malingerers which have come to his notice, during years of experience as a railroad surgeon. Suits for in-

jury which are really based upon justifiable grounds are, according to Dr. King, much in the minority—in fact, he dedicates the book "to those rare individuals, the honest litigants in personal injury litigation—the men and women who do not want something for nothing."

In the course of the chapters, which are divided according to the seat of the supposed injury, the author goes on to show that the prejudice against corporations which is so widespread, influences juries to such an extent, that justice is rarely done and settlements are made, almost without exception, out of all proportion to the injuries received.

While the book is not noteworthy as a literary production, it is interesting alike to the physician, lawyer and lay reader. The breezy style makes good reading for warm weather and there is enough instruction to be gained, to make the reading worth while.

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**Infection, Immunity and Serum Therapy.**—By H. T. Ricketts, M. D., Instructor in Pathology, University of Chicago.  $5\frac{1}{2} \times 7\frac{1}{2}$  inches; 599 pages. American Medical Association Press, Chicago. 1906.

No subject is more difficult to grasp than that of immunity and for one who graduated before the subject was systematically taught, it seems almost a hopeless task to inform himself on this, the most important theme of recent years. Much that is new is not yet in text books, and much of it is to be found in special journals often quite inaccessible to the general reader.

Realizing these facts, the editor of the *Journal of the American Medical Association* published each week, during 1905, a short installment of a continued and systematic article by Ricketts.

The whole has now been revised and brought up to date, forming the most important and best resume for the general medical reader which has appeared. It has been fully indexed. A mastery of this book will leave one well informed on a subject destined more and more to control medical thought and literature. Those who read and appreciated the installments which appeared, will appreciate the finished, revised and indexed work; those who missed some of the numbers and did not find time to study carefully the others, will doubly appreciate Dr. Ricketts' work, now that it is complete. No one can afford not to possess the book, and possessing it, to study it carefully.

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**A Primer of Psychology and Mental Disease.**—For use in Training Schools for Attendants and Nurses and in medical classes, and as a Ready Reference for the Practitioner. By C. B. Burr, M. D., Medical Director of Oak Grove Hospital



(Flint, Mich.) for Mental and Nervous Diseases; formerly Medical Superintendent of the Eastern Michigan Asylum. Third Edition. Thoroughly revised, with illustrations. Pages viii-183, 12mo. Bound in extra vellum cloth, \$1.25 net. F. A. Davis Company, Philadelphia.

This little book which greets us in a third edition has served its purpose well and this last very thorough revision, increased in size by nearly 70 pages, will only add to its popularity.

Doctor Burr has thoroughly revised and amplified Part 1, that treating of elementary psychology, and has practically rewritten the whole of Part 2, which treats of Insanity. The former classification of mental diseases gives way here to that of Kraepelin, as adapted by Diffendorf. Considerable is added here and altogether this section will be found much more satisfactory than that of the former edition.

Parts 3 and 4 treat of the management of cases from the medical and the nursing standpoints respectively.

This work admirably meets its original intent, viz., that of a text book for training schools for attendants; and it is now even a more valuable and convenient book for the practitioner and student.

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**A Treatise on Surgery.**—In two volumes. By George R. Fowler, M. D., Examiner in Surgery, Board of Medical Examiners of the Regents of the University of the State of New York, etc. Two imperial octavos of 725 pages each, with 888 text illustrations and 4 colored plates, all original. Philadelphia and London: W. B. Saunders & Company, 1906. Per set: Cloth, \$15.00 net; half morocco, \$17.00 net.

The second volume of this new work on surgery is at hand. In it, the special surgery of the different regions of the body is taken up in order, and the matter of diagnosis, differential diagnosis and treatment set forth in such a brief, yet comprehensive way, that much ground is covered in a comparatively small space.

Surgery has grown into such an immense subject that it is every day becoming an increasingly difficult task to present such essentials as are necessary for the student and desirable for the practitioner, in a satisfactory manner, without running into several volumes and thus defeating the object of the author. This, Fowler has succeeded in avoiding in a very happy manner.

It may be truly said that this work is a distinct addition to the teaching armamentarium, for it can be safely recommended to the senior student.

The text is exceedingly well edited and elucidated at every step with excellent and well chosen illustrations.

#### Books Received.

**Perjury for Pay.** By Willis P. King, M. D. The Burton Company, Kansas City.

**Infection, Immunity and Serum Therapy.** By H. T. Ricketts, M. D. Press of the American Medical Association, Chicago.

**Gynaecological Diagnosis.** By Arthur E. Giles F. R. C. P. William Wood and Company, New York.

**Transactions of the College of Physicians of Philadelphia.** Printed by the College.

**Consumption and Civilization.** By John B. Huber, M. D. J. B. Lippincott Co., Philadelphia. (Notice next month.)

**Bovee's Gynecology.** Edited by J. Wesley Bovee, assisted by J. Riddle Goffe, G. Brown Miller, George H. Noble, Benjamin R. Schenck, Thos. J. Watkins and X. O. Werder. Octavo; 838 pages, 382 engravings and 60 full page photos in colors. Cloth \$6.00 net. Lea Brothers & Co., Philadelphia, 1906. (Notice next month.)

**A Treatise on Surgery.** By George R. Fowler, M. D. Vol. II. W. B. Saunders Company, Philadelphia.

**Transactions of the American Medico-Psychological Association—1905.** Published by the Association.

**Report of the State Board of Health of Pennsylvania, 1904-05.** Published by the Board.

**Surgical Pathology and Treatment of Diseases of the Ear.** By Clarence J. Blake, Professor in Harvard University, and Henry O. Reik, Associate in Johns Hopkins University. Price \$3.50. D. Appleton & Co., New York. (Notice next month.)

**Human Sexuality.** By J. Richardson Parke, Late Acting Assistant Surgeon, U. S. A. Professional Publishing Co., Philadelphia.

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Post-operative hemorrhage from the base of the bladder that proves inaccessible to ligatures, and uncontrollable by packings, may be checked by the following method: Through several thicknesses of gauze, cut in square, pass a double strand of heavy silk or of twine fastened on a stout needle. With the patient in Trendelenburg's position and the bladder widely opened, thrust the needle from within directly through the perineum, and bring the gauze firmly against the bleeding surface by pulling upon the threads, which are then to be fastened to an outside dressing.

## County Society News.

### OTTAWA.

A regular meeting of the Ottawa County Medical Society was held at Holland, April 10, 1906, with the President, Dr. B. B. Godfrey, in the chair. The following program was given:

Case—Report—"Quinsy Followed by Mupltiple Neuritis"—G. H. Thomas, Holland.

Case—Report—"Pharyngeal Spasm Caused by an Old Tonsillar Crypt"—A. Leenhouts, Holland.

Paper—The "Feeding of the Baby"—J. F. Pepler, Graafschap.

Paper—"Multiple Neuritis"—F. D. Smith, Coopersville, Mich.

Paper—"The Clinical Examination of the Blood"—A T. Godfrey, Holland.

A committee was appointed to arrange for a special meeting to be held for the purpose of discussing the financial conditions of practice, schedules of fees, etc.

A committee was appointed to draw up resolutions endorsing the work of the *Journal of the American Medical Association* against proprietary medicine and nostrum prescribing.

It was decided, upon vote of the members present, to hold meetings hereafter every two months instead of every three months.

E. D. KREMERS, Sec'y.

### WAYNE.

General Meeting April 2, 1906. Dr. J. L. Polozker presented a paper: "Infantile Troubles Due to Improper Feeding, Especially During the Summer Months." The best preventive of diarrheal diseases in infants is clean breast feeding by a mother who has suitable breast milk. The next best preventive is laboratory milk suitably prescribed according to the changing needs of the infant. Third best is home modification of clean cow's milk, but this home modification is seldom carried out correctly without help by a competent nurse. The treatment of diarrheal disease already developed in an infant under one year is, during the first 24 hours, the withdrawal of all food, castor oil two to four teaspoonfuls, and frequent, small quantities of boiled water; second 24 hours, a little whiskey water, teaspoonful to pint, or a little barley or rice water, ounce to pint, strained; third day, gradual return to breast feeding, if breast-fed, any defect in the mother's milk that has been found upon examination having been corrected; if bottle-fed, return to laboratory milk

of half the amount and half the strength that the infant could take in health.

"My experience in the clinic with laboratory milk has proved to me that the laboratory milk gives the best results. When, in the past, they were rapidly dying, home modification of cow's milk made no improvement because of the failure of the mother to carry out our instructions as to modification and cleanliness at home. The last summer, with prescription feeding, and above all by careful attention to details, we had only two deaths to report in the hundred cases. Walker-Gorden milk, properly prescribed by the attending physician, the case being watched carefully as to the digestion of the child from day to day so as to notice the necessity for changing the prescription to a higher or lower percentage of the ingredients, as the case may be, is the only proper feeding when artificial feeding is to be resorted to. Some physicians think this artificial feeding is a fad only for sick children, but it provides food for all cases where the infant cannot get the mother's milk, or when the mother's milk is not sufficiently sustaining."

**Dr. C. G. Jennings:** Home modification in actual practice is usually unsatisfactory because at first the mother is not expert enough and when she has had experience enough to be well trained, the need for modification is mostly past. With the aid of the laboratory, modification is from the first made correctly as ordered, and in the majority of cases is readily satisfactory. It is to be said, however, that in certain instances there seems to be no modification even by the laboratory that is suitable. For instance, there were twins, very much alike apparently in all respects; one was readily nourished by ordinary laboratory modification; the other no modification could be devised to agree with.

**Dr. P. M. Campbell:** "By their stools ye shall know them." Careful routine observation of the stools will enable one to anticipate pronounced digestive disturbance and apply prophylactic measures.

**Dr. Charles Douglas:** The ability of an infant to digest fat decreases in the first few months, while the ability to digest proteid increases. Certain infants cannot digest more fat than the small amount which cannot be removed from the milk.

**Dr. D. S. Walmsley** presented a paper: "Looking Backward." (This paper appears in the current issue of the *Journal*.)

Meeting of the Medical Section, April 9. Dr. E. S. Sherrill presented the paper: "How May the Medical Profession Best Co-operate to

### Reap the Greatest Benefit in Connection With the Passage by Congress of the Pure Food and Drug Bill?"

I. Extracts from Pure Food and Drug bill as reported with amendments, committed to the Committee of the Whole House on the State of the Union, and ordered printed March 7, 1906.

Object of law is to prevent the sale of articles of food or drugs which are adulterated or misbranded. Penalty \$200 for first offense, \$300 upon conviction for each subsequent offense or not to exceed one year imprisonment, or both at discretion of court.

Term "drug" shall include all medicine and preparation recognized in the U. S. P. and N. F. for internal and external use and any substance or mixture intended to be used for the cure, mitigation or prevention of disease of either man or animals.

A drug shall be deemed "adulterated" when sold under the standard of strength, quality or purity recognized in the U. S. P. or N. F. or any other professed standard.

A drug shall be deemed to be adulterated if it is an imitation of or offered for sale under the name of another article, or if the contents of the original package shall have been removed in whole or in part and other contents shall have been placed in such package, or if it fail to have a statement of the quality or proportion of any alcohol therein or of any opium, cocaine or other poisonous substance which may be contained therein.

2. Statements of Dr. Reed. of Cincinnati, Chairman of American Medical Association Committee on Medical Legislation, "Manufacturing establishments, some of them enjoying a high grade of commercial respectability, openly acknowledge that they manufacture pharmaceutical preparations of varying degrees of purity." This statement not readily substantiated.

3. Attitude towards proprietaries. Definition. *Nostrum*, a medicine, the ingredients of which are kept secret for the purpose of restricting the profits of same to the inventor or proprietor. *Patented Medicine*, a medicine on which a patent has been granted by the government. *Trade-marked* or *copyrighted articles*, those the names of which are owned and controlled by some one. *Trade-marked articles*, those whose names are protected as a trade mark, as applied to pharmaceuticals not susceptible of definition acceptable to all. *Proprietary*, a preparation which belongs to some one. Patented medicines and copyrighted medicines

are both proprietary. *Patent Medicines* should refer only to patented medicines. Really refers most commonly to secret, copyrighted or trade-marked articles advertised to the public.

a. Physicians should avail themselves of the provisions of the bill, secure uniform quality of all U. S. P. preparations.

b. The profession should consent to the proprietorship of new medicines.

c. The profession should under no circumstances use secret proprietaries advertised to the general public.

d. The profession should not use secret proprietaries even though advertised only to them. We should claim the right to know the ingredients, the dosage, and physiological effect of any preparation prescribed by us.

e. We should use proprietaries whose composition is made known to us and which are not advertised to the public.

f. We should not use proprietaries whose composition is made known to us, when they are advertised to the public.

4. Suggestion for a Council on Therapy. Members should be skilled clinicians who would test the therapeutic value of every remedy and report formally its findings.

5. Additional suggestions:

a. Medical schools should give more detailed study to *Materia Medica* and *Therapeutics*.

b. Physicians and pharmacists should confer more frequently.

c. Physicians in their societies should give more detailed statements concerning the use of drugs. It is more important to be told how to use a drug than it is to be told simply to use the drug. (Author's abstract.)

Dr. F. L. Newman was elected chairman and Dr. W. J. Wilson, Jr., secretary of the section for 1906-1907.

Meeting of Surgical Section, April 23. Dr. W. F. Metcalf presented a paper: "Prognosis, Immediate and Remote, in the Treatment of Chronic Inflammatory Conditions of the Pelvic Organs by Hysterectomy."

Dr. O. S. Armstrong commended the accurate tabulation of cases as a means of study.

Dr. Max Ball'n: Radical treatment in these cases is effective, but in many instances of women who are still sexually active, less radical treatment that does not induce an artificial menopause, although less effective for cure, is to be preferred.



**Dr. Metcalf:** Hysterectomy before the menopause is to be recommended for inflammatory conditions only in the severe cases. The idea is to make the patient well with the least possible mutilation.

**Dr. J. W. Vaughan** presented a paper: "The Cystoscope as a Diagnostic Aid."

**Dr. F. W. Robbins** said that in certain cases the older Kelly cystoscope was preferable.

**Dr. D. M. Campbell** was elected chairman of the section and **Dr. W. E. Blodgett** was elected secretary, for 1906-1907.

General Meeting, April 30. **Dr. W. S. Anderson** presented a paper: "The Speaking and Singing Voice as Affected by Abnormal Conditions of the Nose and Throat."

This paper deals first with the physiology of the voice, and draws attention to the importance of the chest, trachea, larynx, pharynx, nose and accessory sinuses as resonators of the voice. In the production of articulate speech the sound produced in the larynx is moulded by the lips, tongue, teeth, soft palate and the muscles of the pharyngeal and buccal cavities. The individual character of the voice is due largely to the resonators. In order to have a clear resonant voice it is necessary that the nose and nasopharynx be free, and that the muscles controlling the pharyngeal and buccal cavities perform their functions normally.

The author considers the conditions which affect the voice in the following order: First, abnormal conditions of the nose and sinuses; second, the nasopharynx; and third, the pharynx. Special attention is drawn to the importance of moderate degrees of nasal obstruction. Catarrh of the throat, as understood by the laity, is usually due, or aggravated at least, by improper nasal breathing. A comparatively small amount of interference to the passage of air through the upper portion of the nose, or nasopharynx, will necessitate more or less mouth breathing, which often leads to pathologic changes in the pharynx, larynx and bronchi. Persons with narrow nasal passages are subject to frequent colds, and their voices are easily affected by changes in the temperature and humidity of the air. Mention is also made of the influence upon the voice of adenoids, cleft palate and the various form of paralyses. Special attention is drawn to the effect of hypertrophy of the tonsils. The treatment advocated is the restoration of the nose and throat to as near a normal condition as possible. (Author's abstract.)

**Dr. W. A. Spitzley:** The faucial tonsils are the only likely obstructions to the voice in the throat, and lesions of the vocal cords, except acute inflammations, are rare; therefore the cause for impairment of voice production is to be looked for in the nose.

**Dr. H. J. Hartz:** Jean de Reszke sang years with an obstruction in his nose; upon removal of this in New York, his voice was much improved.

**Dr. Anderson,** in reply to a question, said that tobacco usually produced a transient congestion and disturbance. Alcohol is injurious to the voice, although there are a few famous singers who drink immoderately.

**Dr. H. J. Hartz** presented a paper: "The Pathology of Tuberculosis."

**Dr. W. E. Blodgett** referred to the common experience of having a chronic or apparently healed tuberculosis of a joint made acute again by an accidental or operative trauma. On this account, it is usually wise in a fairly advanced process to avoid forcible correction of the deformity, and to resort to a corrective osteotomy near the joint. In order to determine whether the lighting up of an apparently cured tuberculous joint is due to infectious material encapsulated within the old lesion, or to infection from some other focus in the body outside the joint—and all patients with joint tuberculosis have other tuberculous foci—the speaker had in two instances planted in guinea-pigs suspicious material obtained during operations from old, apparently cured tuberculous joints. Both results were negative. The work is to be continued.

**Dr. W. A. Spitzley:** Those cases of tuberculous peritonitis in which the peritoneum is thickly studded with small gray tubercles, and in which there is a large effusion, thus showing greater peritoneal reaction, are the cases that give the best operative results. Cases with large yellow tubercles, great matting of the intestines, and small effusion, do not give good results.

**Dr. Hartz,** in reply to a question, said that mercury might be beneficial as a germicide to the tubercle bacilli, but that it might also be harmful in softening nature's protective walls of lymphocytes.

General meeting, May 7. A symposium on criminal abortion was held. **Dr. H. W. Long-year** delivered an address: "The Medical and Surgical Aspects of Criminal Abortion." **Clarence A. Lightner, M. A.,** delivered an address: "The Law in Relation to Criminal Abortion."

Rev. Fr. John Richard Command, Trenton, delivered an address: "The Attitude of the Church Toward Criminal Abortion."

Meeting of Surgical Section, May 14. After a dinner given by the Society in his honor, Dr. Howard A. Kelly, Baltimore, delivered an address, with lantern slide demonstrations, entitled: "A Concensus of My Recent Experience in Renal and Ureteral Surgery."

General meeting, May 21. The annual reports were made. The following officers were elected: President, Dr. J. H. Carstens; vice-president, Dr. W. F. Metcalf; secretary-treasurer, Dr. W. D. Ford; directors, Dr. G. W. Wagner, Dr. H. W. Yates, Dr. L. J. Hirschman, Dr. G. L. Kiefer and Dr. F. B. Tibbals.

Meeting of the Medical Section, May 28. Dr. C. T. McClintock and Dr. W. E. King presented the paper: "The Oral Administration of Antitoxins for the Prevention of Diphtheria, Tetanus and possibly Sepsis, with some Observations on the Influence of Certain Drugs in Preventing Digestion and Promoting Absorption from the Alimentary Canal."

Dr. T. B. Cooley said that a considerable part of the cost of diphtheria antitoxin as prepared for subcutaneous injection was the unnecessary variety of amounts in which it was put up. Besides adding to variety of containers, this increases the total amount kept in stock by the retailer, and hence increases the return of deteriorated serum.

Dr. H. W. Longyear: The increased ease and safety of oral administration and the reduced expense will make oral administration of antitoxin especially adapted to prophylaxis.

Dr. W. L. Wilson, Jr., said that he had given antitoxin orally to three exposed children; culture from one of these later showed diphtheria bacilli, although there was clinically no diphtheria.

Dr. Delos Parker: The fact that the period of immunity, 6 or 7 weeks, after oral administration of antitoxin, is the same as after hypodermic use, shows that the antitoxin is not much altered in absorption from gastro-enteric tract.

Dr. Leartus Connor commended the commercial house that had made possible the research reported in the paper.

WILLIAM E. BLODGETT, M. D.

## Correspondence.

Chicago, May 29, 1906.

Dr. Benjamin R. Schenck,  
Detroit, Mich.:

Dear Doctor—Your letter of May 26th is received. I desire to express to you, and through you, to the Michigan State Medical Society, my appreciation of being elected an honorary member of your Society. This is indeed an honor, and I place myself at the service of the Society.

Very truly yours,

J. B. MURPHY.

Port Huron, Mich., May 18, 1906.

Editor of Journal:

On May 16th I attended a meeting of the Huron County Medical Society and the opening of the new Memorial Hospital at Bad Axe. This is a free gift of Mr. F. W. Hubbard to the people of Huron County, erected in memory of his father, Mr. Langdon Hubbard. It is a gem of which Bad Axe and Huron County may well be proud. It is designed not only on correct hospital lines, but is artistic architecturally, beautifully decorated in chaste style and thoroughly attractive. The different rooms have been furnished by various churches and individuals, and one lady furnishes the operating room. When in operation, with its staff of capable surgeons and physicians and its trained nurses, it will offer as convenient, efficient and desirable a means for the relief of human suffering as exists anywhere in the State.

Any community which numbers among its citizens one or more men like Mr. Hubbard could enjoy like privileges. Many communities have men of as great or greater wealth than he, but unfortunately, few are actuated by the generous and all embracing spirit of charity that moved him to this noble work. Men spend untold thousands to rear monuments for their worn out and soon to be forgotten bodies, as if such should be able to stay the current of time that bears their memories on to sure oblivion: whereas if they would do such good deeds as Mr. Hubbard has done, in thus denying themselves for the good of their fellow-men, they would raise monuments that would insure not only lasting but loving remembrance.

I most heartily congratulate the people and profession of Bad Axe and their county.

MORTIMER WILLSON,

Councillor.

**Relief Committee of Physicians of San Francisco****Lane Hospital.**

June 12th, 1906.

To the Secretary,  
Michigan State Medical Society,  
Detroit, Mich.

Dear Doctor:—On behalf of the Relief Committee of Physicians, I beg to extend thanks to you and your colleagues for the generous remembrance for our afflicted brethren. May I ask you to make known to members of your society our sincere appreciation and gratitude for their donation?

With assurances of my esteem, I remain,  
Very truly yours,  
FRED. W. LUX, M. D.,  
Secretary.

San Francisco, June 11, 1906.

Dr. B. R. Schenck,  
Sec'y Michigan State Medical Society,  
Detroit, Mich.:

My Dear Doctor:—Your favor of May 28th, stating that the sum of five hundred dollars had been sent to the physicians of this vicinity through the American Medical Association, has just been received, owing to many postoffice delays. The letter will be officially acknowledged by our secretary, but I wish to personally express our appreciation for what the profession of Michigan has done for us.

We have been overwhelmed with kindness and the response of physicians from all parts of the United States to our appeals for aid was immediate. By actual count, the offices of 910 registered physicians were burned, so you can understand our necessities to some extent.

In most instances, the loss of practice has been the blow which hurts most, for it will be many months before many men can earn a living.

With many thanks, believe me,  
Most sincerely yours,

WALLACE I. TERRY,  
President San Francisco Medical Society.

**Michigan Personals**

Dr. O. C. Breitenbach has been re-appointed Health Officer, and Dr. M. P. Fenelon, City Physician, of Escanaba.

Dr. J. B. Griswold, of Grand Rapids, has resigned from the state board of registration, and Dr. T. A. Felch, of Ishpeming, Councilor of the

Twelfth District, has been appointed by Governor Warner to fill the vacancy.

Dr. S. F. McKay has located at Orion.

Born to Dr. and Mrs. G. M. Livingston, of Manistique, on May 9th, a son.

Dr. C. D. Aaron and Dr. G. S. Field, both of Detroit, are in Europe.

Dr. H. W. Enders is the new city health officer of Eaton Rapids.

Dr. and Mrs. C. H. Inch, of the Kalamazoo Asylum staff, are in Europe.

Dr. J. C. Kenning, formerly house physician at the Children's Free Hospital, Detroit, has located in Grand Rapids.

Dr. W. G. Hutchinson, Dr. E. C. Lee and Dr. G. H. Palmerlee, all of Detroit, have been commissioned assistant surgeons in the National Guard of Michigan.

Dr. W. A. Hackett, of Detroit, and Miss Adele Hagemeister were married June 14th.

Dr. Hal C. Wyman and Miss Lulu Weeks were married June 12th at Mount Vernon, N. Y.

Dr. J. F. Muson, late assistant in hygiene at the University of Michigan, has been appointed pathologist at the Craig Colony for Epileptics.

Re-appointments made by the Wayne County Superintendents of the Poor at Eloise are: General superintendent, Dr. John J. Marker; assistant, Dr. W. B. James; house physician, Dr. H. S. Earl.

Dr. C. J. Sorsen, of Calumet, has gone to Europe.

Dr. J. L. Ambrose has been appointed city physician of Bay City.

Dr. L. M. Cary, Novesta, and Miss Lulu Hall, Bad Axe, were married May 12th.

**Deaths**

Dr. F. R. Hodgson, of Rives, died at the city hospital in Jackson June 2nd.

Dr. E. J. Covey, formerly a practitioner of Flint, died at Durand on April 23rd.

Dr. G. R. Breckon, of Caledonia, died May 5th, at the U. B. A. Hospital, Grand Rapids, of cancer of the stomach.

Dr. Albert Wilton, who formerly resided at Flat Rock, but for the past three years an army surgeon, died in Washington, May 23rd. Dr. Wilton was a graduate of the Detroit College of Medicine in 1900.



## Progress of Medical Science

### MEDICINE.

Conducted by

H. S. OLNEY, M. D.

**Sanitary Supervision of Tuberculosis and Other Communicable Diseases by the Department of Health of New York.**—BILLINGS gives the general procedure which the Department of Health follows in its sanitary supervision of the diseases mentioned. All cases of pulmonary tuberculosis, typhoid fever, and cerebrospinal meningitis are registered at the Department of Health, and all necessary steps are taken to render that registration as accurate and complete as possible. Every person (or the family of such persons) suffering from these diseases is furnished instructions as to the measures to be taken to prevent its extension. Bedding, and so on, used by persons suffering from these diseases is disinfected. All premises which have been occupied by persons suffering from pulmonary tuberculosis or cerebrospinal meningitis, on death, removal, or recovery of the patient, are disinfected with formaldehyde, or renovation is ordered. Charitable assistance or hospital care is provided so far as is possible for all persons wishing or requiring it. The general public is educated as to the nature of the above diseases, the precautions to be taken against their spread, the advisability of institution and sanatorium treatment, and so on. Patients suffering from pulmonary tuberculosis, with no attending physician, are visited at their homes by nurses and given necessary assistance and advice, are provided with extra diet (milk and eggs) when necessary, and are given free medical treatment in the department clinics. Information as to the probable source of infection (water, milk, oysters) is obtained in every case of typhoid fever, and suitable action is taken. In cases of cerebrospinal meningitis quarantine of patients at their homes is enforced and other children in the family are excluded from school. Malarial fever, abortion, puerperal fever, septicemia, erysipelas, and pneumonia are reportable diseases, but at present the patients are not visited.—*Medical Record*, May 19, 1906.

**Fatigue.**—LEE reviews the known facts and the theories regarding the phenomena of fatigue; showing that although physiologists are generally in agreement as to the facts of muscle fatigue so far as demonstrated, and it is pretty certain that the peripheral nerve fibers are themselves exceedingly resistant, the question of the susceptibility of the nerve centers to fatigue is still

considerably in dispute. In view of the recent results of Sherrington, Joteyko, Story and others, LEE is inclined to think that the muscular system tires before the nerve centers, and that the latter are, like the peripheral nerves, resistant to fatigue. They also throw a certain measure of doubt, he says, on all supposed proofs of central fatigue. A physiologic explanation of the facts of mental fatigue is not possible, he says, in the present state of research. We can not deny the fact of fatigue of psychic centers, but we can only speak with caution as to its being of central or peripheral origin. As yet we know too little in regard to the chemical changes attending fatigue. LEE's own experiments make it seem probable that a loss of carbohydrate has considerable part in the production of muscular fatigue, and he has also experimented with three metabolic products generally recognized as fatigue substances, sarcosolactic acid, mono-potassium phosphate and carbon dioxid, and finds that these exercise a toxic depressant action, especially on the muscular system, and that the sensation of fatigue is in large part the psychic manifestation of this depression. Other like fatigue substances will probably be discovered, and Weichardt's alleged discovery of a special fatigue toxin and antitoxin is mentioned in this connection as requiring confirmation. Little is known as to the production of fatigue substances in the central nervous system. The action of these substances, however, is not confined to the tissues in which they arise; excessive activity of one tissue can cause fatigue of others, and there are probably few physiologic functions that are not affected unfavorably by the prolonged and excessive activity of the muscular and nervous systems. The facts of acid intoxication are noticed as analogous to fatigue phenomena, so far as the latter are due to toxic substances. In conclusion, LEE mentions as noteworthy the lack of serious endeavor, except by the nostrum vendors, to provide specific antidotes for fatigue, considering its importance in our daily life. Alcohol, which in small amount seems to have a favorable action, is followed by unfavorable after effects and can not be classed as a valuable antidote, and the same is true of other substances of similar physiologic properties. A true antidote must recognize the causes. Both scientific and unscientific experience have shown the real value of sugar as a partial restorer of working power, and alkali, such as sodium bicarbonate, may not be without some value. These, however, are only in part efficacious and only rest and sleep can be thoroughly relied on.—*Jour. A. M. A.*, May 19, 1906

## SURGERY.

Conducted by

MAX BALLIN, M. D.

**Post-operative Ileus.**—Among the serious complications which may follow a surgical operation involving the opening of the abdominal cavity, there is none, except secondary hemorrhage, which more urgently demands an early diagnosis and prompt relief than intestinal obstruction. In isolated instances it has been observed after operations where the peritoneal cavity was unopened. Post-operative ileus is not a rare affection. FINNEY relates twenty-six cases of post-operative ileus in his hospital and private practice, twenty-two of which required secondary operation of one sort or another. The two great factors concerned in the etiology of post-operative ileus are of either mechanical or septic origin. There is still a third and much smaller class in the development of which neither of these two forces is directly concerned, namely, those rare and interesting cases of adynamic ileus having their origin in disturbed conditions of the innervation and circulation of the intestine. He would, therefore, divide post-operative ileus into three main classes: (a) mechanical, (b) septic, (c) adynamic. But a hard and fast distinction is difficult to maintain owing to the fact that they may all be present in the same individual. Adhesions are the chief factor to be reckoned with in an attempt to prevent the occurrence of post-operative ileus, and efforts directed toward this end are likely to be productive of the best results. That drainage exercises a marked influence in the production of adhesions cannot be denied.

**Treatment.**—Prompt operation is indicated in every case after palliative measures have been given a fair trial and have failed. The character of the operation depends upon the nature of the obstruction and the condition of the patient. The prognosis is unfavorably influenced by the presence of infection. In its absence, it is excellent.—(Finney, *Annals of Surgery*, June 1906.)

**Instrumentary Technic and Results of Epidural Injections.**—CATHELIN, in 1901, first made injections of certain solutions in the epidural space; that is, the space between the dura mater of the spine and the inner periosteum of the vertebral canal. This space is not patent anywhere in the spinal canal except in the lower part of the os sacrum, where it expands into the "ampulla" of the epidural space, as the dura mater terminates at the second sacral vertebra. This ampulla of the epidural space can be reached easily,

with an aspirating needle, from the "hiatus sacralis." This opening of the end of the sacral canal is found in the following manner: The patient is placed in a lateral position, the thighs being flexed upon the abdomen; the spinal processes of the os sacrum are palpated with the left index finger and followed downward, until the finger reaches a small triangular groove, bordered laterally by two small bony prominences. This groove is the "hiatus sacralis" and is marked with the left index finger, so that the right hand can easily introduce an aspirating needle about three inches long. The needle is held firm at an angle of 45 degrees to the vertical line of the body, and after touching the anterior wall of the sacral canal, the handle of the needle is brought closer to the coccyx and then can easily be introduced into the epidural space. If cerebro-spinal fluid escapes, the needle has been introduced into the dural sac, and must be withdrawn until the cerebro-spinal liquor stops escaping. The position of the needle is also to be changed, if flow of blood indicates injury of a vein; otherwise a syringe can be attached and the solution be injected. These injections have been used for anesthetic purposes in operations on animals and for analgesia on men, in case of sciatic pain, etc. The most valuable results of these epidural injections have been obtained in the treatment of enuresis and irritable bladder. Of 30 cases of enuresis of HIRSCH's, 80 per cent were permanently cured, 13 per cent bettered, 7 per cent not improved. The injections seem to have more than a suggestive influence in cases of enuresis, as a hyperemia of the vesical trigonum can be seen by cystoscope after the injection. Sometimes one epidural injection is sufficient to cure a stubborn case of enuresis, but it is better to give at least three such injections, at intervals of two to three days. The following solution is used for the injection in cases of enuresis: Chloride of sodium, 0.2 (gr. iii); cocaine hydrochlor, 0.01 (gr. 1/6); distilled and sterilized water, 100 (oz. iii 1/8). The solution is injected warm, in quantities of 10-20 g. (3iiss to 3v) in adults, and of 5-15 g. (3i 1/4-3iii 3/4) in children. Also other medicines have been introduced in the epidural space, for instance, iodoform emulsion in Potts Disease.—Maximilian Hirsch, *Vienna Centralblatt fuer Chirurgie*, 1906, No. 21.



## GYNECOLOGY AND OBSTETRICS.

Conducted by

REUBEN PETERSON, M. D.

**Cesarean Section in Placenta Prævia.**—

BRIGGS reports four cases of placenta prævia, in two of which he operated successfully by Cesarean section. In one case he also succeeded in saving the child. His ideas are summed up substantially as follows: 1. Every pregnant woman should be examined during the sixth month for this possibility and its degree. The examination should be bimanual, both by the vagina and rectum, and stethoscopically by the vagina and abdomen. 2. In case of central placenta prævia, elective Cesarean section of Sanger type should be done at the earliest period of viability of the fetus consistent with safety of the mother. 3. In case the fetus is dead and labor is not spontaneous, it should be induced after shutting of placental circulation. 4. In emergency cases, with the woman not exsanguinated and an experienced operator at hand, the Sanger operation should be preferred if the uterus is clean or only superficially infected. The Porro operation should be selected in case it is positively and deeply infected. (a) In cases of total placenta prævia with (1) undilated and undilatable cervix; (2) cancerous or fibroid cervix, pelvic tumors, pelvic contraction or other obstacle; (3) ruptured sac with escape of amniotic fluid and presenting, but undescended, head. (b) In cases of lateral placenta prævia with living child, uncontrollable bleeding, and either (1) undilatable cervix or other obstacle to the usual obstetric procedure; or (2) ruptured and emptied sac with presenting but undescended head. 5. In elective cases full and systematic preparation should be made and the operation performed with every precaution and appliance that is called for. 6. In imperative emergency cases the surgeon must operate with whatever means are at hand. 7. Hemorrhage may be prevented by giving a full hypodermic dose of ergot ten minutes before operation, by compressing the aorta as soon as the child is delivered, grasping the neck of the uterus low down with both hands and firmly compressing the uterine arteries and by faradic stimulation of the uterine muscle. 8. Shock may be obviated and relieved by prevention of hemorrhage, by rapid operation, by the use of physiologic salt solution by the rectum and otherwise, by hypodermic or intravenous use of adrenalin solution and by aortic compression. 9. In the after-treatment purgation should be avoided; colon injections of sa-

line solution, from 8 to 16 ounces, may be given at from three to eight-hour intervals; enemata may be used. 10. Any evidence of uterine infection must be met by vigorous measures of local disinfection by means of antiseptic exosmosis and drainage.—*Jour. A. M. A.*, May 12, 1906.

**A Case of Heteroplastic Ovarian Grafting, Followed by Pregnancy, and the Delivery of a Living Child.**—MORRIS reports this case. The patient was a married woman, twenty-one years old. Menstruation began when she was fifteen years old and stopped in four years. The last two years the patient had suffered from the common symptoms of the menopause. The writer made a diagnosis of cirrhotic ovaritis and decided to do ovarian grafting. Four months after the operation the patient menstruated. The period lasted for five days. It was five months before menstruation again took place, lasting but one day. In the following month it lasted four days, and after that it appeared at normal intervals. Four years after the grafting the patient was delivered of a child weighing seven and one-half pounds. The writer states that the present case of heteroplastic grafting renews the hope that certain women who have reached the menopause through disease, surgical operation, or possibly after the normal menopause, may be made fertile.—*Medical Record*, May 5, 1906.

**Diagnostic Significance of Ureteric Meatoscopy in Renal Diseases.**—Changes in the appearance of the ureteral orifices, in connection with different diseases of the kidneys and ureters, have been reported by various authorities, and KLOTZ gives the results of the investigation of a series of cases undertaken to determine the value of the method.

In eight of nine cases of nephrolithiasis there were changes in the meatus, varying from a slight elevation of the mucous membrane to marked eversion of the lower end of the ureter. In the group of pyogenic infection of the kidney, comprising 13 cases, there were changes in eight. In six cases of tuberculosis there were alterations from the normal in five. In the fourth group of these cases of unilateral hematuria, urine was seen coming from the affected side. Two cases of cystic disease presented normal orifices. The method is thus proven to have a very decided value.—*Surg. Gyn. and Ob.*, May, 1906.



## PATHOLOGY AND BACTERIOLOGY

Conducted by

A. P. OHLMACHER, M. D.

**A Newly Identified Poisonous Action of Horse's Serum.**—A phenomenon which has been observed by occasional workers in serum institutes is the subject of an elaborate experimental investigation of ROSENAU and ANDERSON. The subjects for these experiments were guinea pigs. It was found that an intraperitoneal or subcutaneous injection of horse's serum, either normal or antitoxic, even in minute amount, would so "sensitize" the guinea pig as to render it abnormally susceptible to a second intraperitoneal or subcutaneous dose given after an interval of ten or more days. This susceptibility manifested itself by symptoms of profound intoxication apparently exerted primarily on the respiratory system, and the treated animal either died suddenly, or after a few hours recovered from the affection, which consisted of respiratory embarrassment, paralysis, and convulsions. The heart continued to beat long after respiration ceased. Essentially the same results followed the use of ordinary antidiaphtheric serum from various sources, the "refined and concentrated" serum of the Gibson process, and was not modified by serum which had been dried, nor by that which was fresh or old. It is clearly pointed out by ROSENAU and ANDERSON that a single injection of horse's serum (normal or antitoxic) is absolutely innocuous. Moreover, if several injections be given during the ten or more days constituting what the authors call the "incubation period" subsequent doses fail to excite the poisonous effects. But once "sensitized" a guinea pig is susceptible to the second dose for a long period, the tests having been positive after 160 days. Very minute quantities of serum serve to arouse this susceptibility.

The bearings of this interesting and important research upon the question of serum sequels in man is at present problematical; though ROSENAU and ANDERSON believe that some relationship exists between the phenomena observed by them in guinea pigs and the occasional untoward serum reactions of human beings. While they strongly emphasize the statement, "*Diphtheria antitoxin plays no part in this poisonous action, and is in itself harmless,*" evidence is brought forth to show the possible identity of the "immediate" or "accelerated" reaction described by Von Pirquet and Schick in their study of the "serum disease," and the toxic phenomena elicited in guinea pigs. In any event it is clear that this possible relationship must be considered in explaining the happily very uncommon event of sudden death after se-

rum injection in man. Along with *status lymphaticus*, and "individual susceptibility," this "sensitizing" action of blood serum as demonstrated by the American workers must be considered. Although their work is not completed, ROSENAU and ANDERSON have shown the great importance of so arranging the dosage of a curative serum as not to "sensitize" a human being. This means either that a large dose should be given at first, or that several of smaller amount should be repeated at intervals during the ten days constituting the "incubation period."—*Bulletin No. 29, Hygienic Laboratory U. S. Public Health and Marine Hospital Service, Washington, April, 1906.*

**Investigations Upon the Aggressins of Streptococcus Pyogenes.**—Among the several recent hypotheses aiming at an explanation of the modus operandi of streptococcus infection and streptococcus immunity, Bail's aggressive theory, which has been applied to other microorganisms, is now advanced and experimentally tested by WEIL.

Streptococcus aggressin is obtained by exciting a hemorrhagic-cellular pleural exudate in rabbits through the agency of intrathoracic injections of virulent streptococci. After depositing the cells and bacteria by the centrifuge, the clear reddish fluid is sterilized by treatment with toluol. Whether the substance in question is a secretory product of the streptococci, or supplied by the tissues of the rabbit cannot be settled now. But it must have the property of stimulating infection, and animals treated with it must, by formation of antiaggressin, be immunized. Experiments were made on guinea pigs to test these points. A highly virulent streptococcus was used in fixed minute doses intraperitoneally in control animals, and multiples of the minimal dose were administered to guinea pigs previously treated by injections of increasing quantities of aggressin, three injections of 0.5, 1, and 2 cc. in a period of 21 days being employed. Such aggressin-immune animals survived several hours beyond the time in which the minimal dose killed, and this despite the fact that many times the fatal dose was used in them.

To study the effect of the treatment peritoneal fluid was obtained and examined at intervals. A most significant phenomenon was the early and active phagocytosis in the aggressin-immune animals and the relative infrequency of this process in the control guinea pigs. Analyzing the various experiments WEIL concludes that aggressin immunity enables the animal to inhibit the rapid increase of virulent streptococci and to so weaken the organisms as to cause them easily to fall prey to leucocytes.—*Deutsche med. Wochenschrift, Jahrg. 32, Nr. 10, 1906.*

## PHARMACOLOGY AND THERAPEUTICS.

Conducted by

C. W. EDMUNDS, M. D.

**Treatment of Hematuria of Renal Origin.—**

BULLOCK considers calcium chloride and suprarenal extracts as the two most valuable hemostatic drugs to be employed in profuse hemorrhage from the kidney. The former should be used in 30 grain doses every four hours. If after six doses there is no improvement, it should be replaced by suprarenal extract which he advises in 5 grain doses every four hours and later every six hours. If neither of these have any effect ergot may be tried as may also lead acetate or hamamelis.

Hematuria associated with acute nephritis requires no special treatment beyond that of the general kidney condition; counter irritation, diaphoretics and purgatives. A good diuretic is potassium citrate, a teaspoonful to a pint of water. Hematuria produced by other causes as calculus, new growth, tuberculosis, etc., have to be treated by attention to the underlying cause.—*Practitioner*, Vol. LXXVI. p. 693, May, 1906.

**Antiseptic Powder**—DOYER, at the 15th International Congress of Medicine, reported the discovery of a new antiseptic powder to replace salol and iodoform. This powder, a combination of formic aldehyde and casein, has been named Proteol. Unlike other similar compounds it is not subjected to heat in its manufacture so the formic aldehyde is not rendered inert. Tubes of nutrient bouillon inoculated with virulent bacteria and to which some proteol is added are sterile after about twelve hours.

It makes a good dressing for wounds and may be combined with soap to disinfect the site of operation, etc.—*Lancet*, Vol. 170, p. 1268.

**Stovain Poisoning After Lumbar Anaesthesia.**—FRANTENROTH reports a very interesting case of stovain poisoning in a 30-year-old woman in whom spinal anaesthesia was produced during the course of labor, preliminary to the use of forceps. One grain of stovain was injected following the injection of adrenalin. Within ten minutes there were marked symptoms of collapse with dyspnea and cyanosis of the lips and mucous membranes. After the use of camphor the patient improved somewhat, but there was paralysis of both arms and legs, which did not disappear completely even by the following day.

A few days later the patient complained of a very severe headache with sharp pains radiating into the limbs. Still later the patient said her right leg felt ice cold.

Shortly afterward and fourteen days after the use of stovain marked symptoms appeared in the right leg which FRANTENROTH thinks were due to a local spinal meningitis and neuritis of the right posterior spinal roots. These symptoms did not disappear for about three months. FRANTENROTH explains the symptoms as being due to irritation produced by the stovain and which in some cases has been followed by gangrene.

One case he cites was where a solution of stovain was injected into the abdomen of a patient suffering from a septic process. Local irritation was induced and gangrene at the point of injection followed, due no doubt to the lessened local resistance of the tissues giving a favorable point for the growth of the streptococci. The case terminated fatally from suppurative meningitis.—*Deutsch. med. Wochenschr.*, XXXII., No. 7, 1906.

**Stovain as Local Anaesthetic.**—For nose, throat and eye work, MCKENZIE thinks a 10% solution of stovain is as good an anaesthetic as cocaine and it has never given any toxic symptoms. He, too, has noticed an injurious local effect upon the tissues if it is left in contact too long, as sloughing has occurred several times. He says it should never be left in contact with the tissues longer than fifteen minutes.—*Brit. Med. Jour.*, No. 2367, p. 1099, 1906.

**Poisoning Due to Picric Acid Dressings on Burns.**—ELLIOT reports the case of a girl, aged 14, who was burned on both arms and at the hospital where she was treated picric acid dressings were used. One week later she suffered from nausea and vomiting and jaundice with a temperature of 102.4° and pulse 154. A rash resembling that of measles appeared on almost all parts of the body except the face, hands and front of the legs. The blood showed a lessened number of red cells with increased number of leucocytes, especially eosinophiles. The urine was a bright red with a greenish shimmer on the surface. The dressing were changed.

The rash had entirely faded eight days later. Two days afterward the patient complained of pain in the abdomen and she vomited. Three weeks later she was readmitted to the hospital with abdominal pain and vomiting of blood. Blood was present in the urine and stools. At the end of a month she was discharged although she had a marked albuminuria. It was impossible to identify the urinary pigment.—*Lancet*, Vol. 170, p. 1175, 1906.



## NEUROLOGY.

Conducted by

C. W. HITCHCOCK, M. D.

**Researches on the Blood of Epileptics.**—Even if it be with little positive results that the various researches upon the etiology of epilepsy have thus far been conducted, the patient care of the workers in the field stands an eloquent testimony to the scientific spirit. Various researches are being continually carried on and ONUF and LOGRASSO report the results of their work, observations having been made in a number of cases, at the Craig Colony for Epileptics.

Some of their conclusions are as follows:

The fluctuations in the leucocyte count cannot be explained purely by the daily influence of meals, work or sleep, but that some additional factors must be at work to produce them and, further, their observations show, First, that a leucytosis may already be present directly before a seizure, and if so, is then, of course, not a purely secondary phenomenon produced by the seizure. The second fact brought out is that a grand mal seizure need not necessarily be preceded or ushered in by a leucocytosis. They also say: "These observations certainly teach the important fact that there is no absolute parallelism between seizure and leucocytosis in so far as, even when a distinct leucocytosis is present, such may reach its height at different periods in different seizures; they also show that the leucocytosis is, in part, at least, independent of the seizure."—*Am. Jour. Med. Sc.*, Feb'y. '06.

**Certain Headaches.**—ROSS treats of certain headaches which he terms "the lymphatic type of headache," and which are characterized by alimentary symptoms (anorexia, pain after food, heart burn, nausea, and constipation), respiratory (cough and shortness of breath; rarely expectoration), cardiac (palpitation and hemic murmur, full, soft pulse), genito-urinary (slight albuminuria, amenorrhoea, menorrhagia, or dysmenorrhoea), and cutaneous (chillblains, urticaria and edema), and other symptoms pertaining to the central nervous system, viz., usually heavy sleep with a feeling of being less rested than before retiring, or in cases, a much disturbed sleep; irritability combined with languor; all degrees of mental depression.

The association of such headaches with troublesome urticaria he deems especially significant of a deficient coagulability of the blood and this condition he believes especially amenable to the salts of calcium. He has used both the lactate, which

he prefers as more palatable, and the chlorids, which sometimes nauseate.

The following he has found a good mixture: Calcium lactate gr. 15, Tr. capsici oz.  $\frac{1}{2}$  in chloroform water t. i. d. a. c. or he administers the lactate of calcium gr. 15, in  $\frac{1}{3}$  tumblerfull of water, before each meal.

This treatment he has found quite efficient in relieving this class of headaches.—*Canadian Practitioner*, May, 1906.

**The Function of the Left Pre-Frontal Lobe.**

—PHELPS, who in 1904 had published a monograph suggesting a more limited seat of control for the mental faculties than is commonly accepted, has made further studies of cases of injury to the brain, with post-mortem findings.

His original propositions were:

"First, The more absolutely the lesion is limited to the left pre-frontal lobe, the more positive and distinctive are the symptoms of mental default.

Second. The integrity of the mental faculties remains unimpaired with right frontal lesion, even though it involves the destruction of the entire lobe, or even extends to the entire (right) hemisphere.

Third. The exceptional instances in which seemingly opposite conditions exist are always reconcilable, on more careful examination with the assertion of an exclusive control of the mental faculties residing in the pre-frontal region of the left side."

As a result of his further studies, he now concludes:

1. Mental decadence always attends lesion of both prefrontal regions alone. 2. Mental decadence always attends lesion of the left prefrontal region alone. 3. Mental decadence never attends lesion of the right prefrontal region alone.—*Amer. Jour. Med. Sci.*, March, 1906.

**Operations for Relief of Pelvic Diseases of Insane Women.**—BROWN carefully reviews the literature upon the subject and then gives his own conclusions from studies made upon cases at the Manhattan State Hospital West, as follows:

"We regard these patients as having a right to be relieved of their physical suffering, and when such a relief can be given through surgery, it is the desire (in this hospital) that such shall be afforded them. It is in this spirit that these operations have been done and it is in the same spirit that Manton and Pique have been operating for years previous. With the physical improvement resulting, some of the patients have gone on under the regular hospital treatment to a complete mental recovery."

"One such cure of the patient's mental disturbance is more than a balance against many failures. This is especially true, as, in no instance in the experience of Manton and Pique or myself, has the mental state of the patient been injured by the operation done."—*Amer. Jour. Med. Sci.*, February, 1906.



## LARYNGOLOGY.

Conducted by

J. E. GLEASON.

**Regional Anaesthetization of the Larynx.—**

FREY reports 25 cases of complete anaesthesia of the larynx produced by injection of 1 ccm. of a 1½% solution of cocaine in salt solution with the addition of a small amount of adrenalin, directly over the superior laryngeal nerve. The technic is comparatively simple. The patient is seated, and by palpation the position of the great horn of the hyoid and the upper posterior angle of the thyroid cartilage is determined. The site of injection is midway between these points about three centimeters from the median line. With the larynx pushed slightly toward the side in which the injection is to be made, the needle is entered to an average depth of 1 cm. into the free room between the musculus thyrohyoideus and the membrana thyrohyoidea. It is then directed slightly backward, and the solution gradually injected as the needle is brought forward to the point of puncture. Complete anaesthesia results in from 5 to 15 minutes, and lasts on the average about 20 minutes. The advantages claimed for this method are the use of a minimal definite quantity of cocaine and the ease of its application.—*Archiv. für Laryngol.*, Vol. XVIII., No. 2.

**Bier's Hyperaemia as a Therapeutic Agent in Diseases of the Upper Air Passages.—**

POLYAK reviews the literature of the treatment of inflammatory diseases of the head and face according to the method first advanced by Bier. (*Hyperaemie als Heilmittel*, Leipsig, 1905.) The author has made use of this method in laryngology, the hyperaemia being obtained both passively by means of an elastic bandage applied around the neck, and by suction, produced by instruments designed especially for this purpose. A rubber bandage, 3 cm. in width for adults and 2 cm. for children, is applied below the larynx low down around the neck, and is capable of adjustment to the desired tightness. It should never be tight enough to produce marked congestion or headache. The time of application varies with the condition. In general, the average for nose and throat diseases is 8 to 12 hours a day, interrupted 2-3 times for an hour to an hour and a half. In larynx diseases, one hour two or three times daily, controlled especially in the beginning by inspection of the larynx, has produced the best results in the author's hands. In cases where it is well borne, however, the time can be gradually increased to from 8 to 10 hours

daily. The suction hyperaemia is obtained by an apparatus especially designed to fit the nasopharynx, pharynx and tonsils. It consists of a hollow glass tube with a broad end, reservoir and suction bulb. Suction is to be applied very gently and not more often than twice daily, each period consisting of three five minute applications with corresponding intervals. The author's researches, based upon 28 cases of diseases of the nose and sinuses seem to favor the use of passive congestion in acute catarrhal and suppurative diseases, chronic suppurative processes with crust formation, torpid ulcerative conditions and tuberculosis. Acute catarrhal, suppurative and phlegmonous inflammations of the nasopharynx, throat and tonsils should have combined the passive and suction hyperaemia. The most striking result of this treatment is the relief of pain, and judging from his 8 cases of tuberculosis of the larynx thus treated, the author concluded that the dysphagia can be quickly and favorably relieved by this method. His results, the first published in laryngology, warrant him in continuing his researches.—*Archiv. für Laryngol.*, Vol. 18, No. 2.

**Hypertrophic Pharyngeal Tonsils in the Aged.**—FRANK reports three cases of adenoids developing in patients of 60, 65 and 66 years of age, which caused symptoms as in children, namely, interference with nasal breathing, and diminished power of hearing. Removal of the tissue relieved the condition. In elderly people the growth of adenoids is a very rare occurrence, and the diagnosis should always be confirmed after removal by microscopical examination, as the majority of tumors in the nasopharynx at such an age are malignant. Microscopically the striking appearance of such tissue is the small number of follicles, their oval shape, and their apparent compression by the surrounding reticulum, which proves that the latter is the part especially involved in the hyperplasia.—*Archiv. für Laryngol.*, 18-2.

**Laryngoscopy Subglottica.**—GERBER describes a laryngoscope consisting of a small oval glass attached at an angle of 135° to a long handle, which is bent 9 cm. from the attachment in order to fit into the larynx. It is to be used in connection with the ordinary laryngoscope to explore the laryngeal part of the epiglottis, ventricles, posterior wall of the larynx and the subglottic region.—*Archiv. für Laryngol.*, 18-2.

## GENITO-URINARY SURGERY.

Conducted by

W. A. SPITZLEY, M. D.

**Ureteral Calculus.**—In former years ureteral calculi, as compared with the frequency of renal calculi, were considered of rather rare occurrence; today the Roentgen rays have shown, in cases where the X-ray diagnosis has been confirmed either by operation or by recovery of the stone, the ratio of ureteral to renal calculi to be as 44 to 29.

Renal calculi in their descent to the bladder are prone to be arrested at three points in their course: (1) two inches from the pelvis of the kidney, as the ureter bends forward over the psoas muscle; (2) at the brim of the pelvis where it dips down across the bifurcation of the common iliac artery; (3) close to the vesical orifice of the ureter.

The important diagnostic point to determine is whether the stone has been arrested in its course from kidney to bladder, and if so, where. This is usually difficult from the symptoms alone. If the tenderness at the point of the impaction is not definite enough to be a guide, and if the Röntgen rays do not give positive information, then it is best first to explore the kidney through the loin and to pass a sound down the ureter to ascertain the presence or absence of the stone in this duct.

Calculi may in some cases remain in the ureters for a long period, sometimes even without producing pronounced symptoms: they may be passed on into the bladder either by ureteral peristalsis or by the *vis a tergo* of the kidney's secretion; CABOT thinks massage is of material aid to the descent. The author believes that the dangers which may ensue from neglect of ureteral calculus, however, are greater than those attending its removal; in other words, the most conservative treatment is surgical.

The route to be chosen for removal is important; when the calculus is known to be near the bladder, especially if the patient is a woman, the intravesical route (working through the dilated urethra) is to be preferred; in all other cases, the extra peritoneal route through lumbar incision is the one of choice.

The attempt should always be made gently, however, to push a ureteral calculus either upward into the pelvis of the kidney or downward into the bladder; this attempt must not be carried to the point of injuring the ureteral tissue. If dislodgment is impossible, then the ureter should be incised, the stone extracted and the wound closed, preferably by two rows of sutures, the submucous one being of fine catgut, the outer one silk, of the Lembert type.

Drainage down to the point of suture is of course necessary to take care of the probable leakage; danger of a permanent urinary fistula

the author believes to be exaggerated.—Deaver, *Annals of Surgery*, May, 1906.)

**The Transperitoneal Examination of the Ureter in Cases of Suspected Calculus and the Combined Intra- and Extra-Peritoneal Ureterolithotomy.**—The author believes that careful and thorough palpation of the ureters is a necessity whenever the abdomen is opened for lesions of other organs, especially in the less acute cases of appendicitis; and he reports two cases of supposed appendicitis sent to him for operation in which the real lesion was found to be ureteral stone.

Transperitoneal examination means nothing more than palpation of the ureter with the hand in the abdominal cavity; this renders finding of the calculus easy.

In the combined method of operation, the peritoneum, beginning at the abdominal incision, is stripped from the abdominal and pelvic walls down to the ureter, no separate lumbar or inguinal incision being made. The finger or hand in the pelvic cavity pushes the ureter up into the extra-peritoneal space within easy reach of the other hand and thus renders opening of the ureter easy. The peritoneal cavity is closed tightly, but a gauze drain is placed at the point of opening of the ureter and passed out through the superficial tissue at the lower end of the abdominal wound.

The author did not suture the incised ureters in his two cases, but would do so in the future. He had no infection and no urinary fistula resulted.—(Gibbon, *Annals of Surgery*, May, 1906.)

**Conservatism in the Treatment of Senile Hypertrophy of the Prostate.**—JOHN VAN DER POEL believes that catheterism properly applied and at the right time renders unnecessary many operations. Modern technique and advance in the knowledge of prostatectomy now make operations justifiable, which would not have been so according to former statistics. Operation must be considered much earlier in poorer patients or where aseptic catheterism is practically impossible than in other cases. Prophylactic prostatectomy cannot be recommended. In acute retentions the catheter should be given a full trial before intervention. In certain cases catheterism will re-establish the urinary function for many years, no matter what may be the condition of the prostate. In chronic retentions, if the case is aseptic, catheterism is preferable. If the case is septic and has been so for some time, clean catheterism seems to be powerless to eradicate its effects and operation is indicated.—*Medical Record*, May 26, 1906.

## ORTHOPEDIC SURGERY

Conducted by

WILLIAM E. BLODGETT, M. D.

**Classification of Cases Heretofore Called Rheumatoid Arthritis.**—NATHAN limits this article to consideration of rheumatoid arthritis in contradistinction to osteo-arthritis, i. e., to those diseases of the joints which primarily involve the synovial membrane and soft parts of the joints, in distinction from those joint diseases which primarily involve the adjacent bone. These cases of rheumatoid arthritis NATHAN divides into (1) metabolic joint diseases and (2) infectious poly-arthritis. The metabolic joint diseases he subdivides into an arteriosclerotic form, which consists of a hardening of the soft structures of the joints, beginning with the peripheral joints and proceeding toward the center, and the auto-toxic form, which is quickly deforming. The metabolic joint diseases are usually chronic from the start, while the infectious joint diseases may be acute.—*Am. Jour. Med. Sciences*, Jan., 1906.

**The Etiology, Pathology, and Classification of Certain Forms of Joint Disease, with a Scheme for the Classification of Joint Diseases Generally.**—In this article, which is one of an unfinished series, NATHAN suggests a classification which can be tabulated as follows:

**Synovial Forms.**

*Inflammatory or Infectious* (group name): Tuberculous, syphilitic, gonorrhoeal, typhoid, etc.  
*Trophic* (group name): Senile, metabolic, toxæmic (as with phthisis).

**Osseous Forms.**

*Inflammatory or Infectious* (group name): Tuberculous, syphilitic, gonorrhoeal, typhoid, etc.  
*Trophic* (group name): Senile, metabolic, neurotic, toxæmic.—*Am. Jour. Med. Sciences*, Apr., 1906.

**Observations on Broken Necks.**—On the basis of three carefully studied cases, SAYRE is lead to believe that the best results are secured by immediate reduction of the fracture and immobilization in plaster-of-Paris helmet and corset applied, if possible, in suspension. If this is impossible, by pouring liquid plaster-of-Paris around the neck, head, and shoulders, while the patient is horizontal. In applying the bandages to the head, it is well to put a roller bandage in the patient's mouth to allow room for the patient to eat.

In case there exist paralysis which cannot be relieved by manipulation, the spine should be exposed by incision, and effort made to relieve pressure on the cord. The cord may be so lacerated that repair is impossible, but this cannot

be learned positively until the cord has been exposed. In any event, the X-ray will be of great assistance. In taking lateral views of the lower part of the neck, it is sometimes necessary to hold down one shoulder by a bandage in order to put the plate low enough to show a fracture below the fifth cervical vertebrae.

Support should be continued for at least three months. Attempts to allow patients to leave bed with the neck unsupported earlier than this are liable to result in pressure paralysis.

If complete readjustment of fragments can be secured, a perfect recovery without deformity or restriction of movement is to be expected, unless the cord has been lacerated at time of accident.

If perfect adjustment cannot be secured, there is likely to be slight restriction of mobility and slight deviation from normal position.—*Am. Jour. Orthopedic Surg.*, Apr., 1906.

**On the Value of the Objections Made to Forcible Straightening in the Treatment of Knock Knee.**—CODIVILLA (Bologna) advocates slipping of the lower epiphysis of the femur in correction of knock knee. The common objection to this method of treatment is that growth is interfered with and shortening results. In 700 cases of accidental separation of human epiphyses reported by Poland, alteration in the development of the bone was found only 56 times. Alteration of growth of the femur from accidental separation of its lower epiphysis was particularly rare. Experiments on animals have given conflicting results. It is probable that whether the later growth is to be affected depends upon the manner in which the accidental separation of the epiphysis takes place, rather than upon the fact of separation. In 2,000 operative separations of the lower femoral epiphysis for knock knee, reported by the author, many of them examined ten years after treatment, not a single instance of interference with growth was found. The epiphyseal operation is to be preferred to supracondylar osteotomy, so the author believes, because there is less chance for displacement of fragments, because the nature of the correction is better adapted to the deformity, and because it involves really less risk of interference with growth than even osteotomy.—*Rev. d'Orthopédie*, Mar., 1906.



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## Original Articles

### RURAL CITY MILK SUPPLIES—THEIR RELATION TO INFANT FEED- ING—HOME MODIFICATION VERSUS LABORATORY FEEDING\*

ANNA MARION COOK, M. D.,  
and  
DAVID MURRAY COWIE, M. D.

(From the Department of Pediatrics, University of  
Michigan.)

Excepting the good that may come from frequent repetition of already known facts, thus aiding the dissemination of the knowledge of modern infant feeding, it would seem that there is little excuse for an article having the above title. When, on the other hand, we compare the analyses of milk made in various countries and various parts of our own country, note the variety of results obtained, and the analyses upon which are based the many formulae that have been introduced in text books, endeavor with failure to reproduce results vouched for by standard methods of obtaining definite fat percentages for home feed-

ing, it would seem that some value may be attached to any investigation that will help to clear up some of these discrepancies.

Rural Milk Supplies: Towns of 10,000 to 20,000 population, proportionate to their size, receive their milk from a radius of 20, 30, 40, and often 50 miles. As distance is time and time and handling are bacterial growth, it is not difficult to see how conditions that obtain in small towns are superior to those in the larger cities. It is a well known fact that the so-called good creams of large cities are usually several days old. Conditions are better with certified milk. Seldom in rural districts is cream delivered over 24 hours old.

The writers are indebted to the Ann

\*Read before the Section on Medicine at the Jackson Meeting of the Michigan State Medical Society, and approved for publication by the Publication Committee.

Arbor Board of Health for supplying them with samples of milk from the various dairy farms which supply the city, and we take this opportunity to thank Dr. Wessinger, the health officer, for much useful information furnished us at an expense of his valuable time.

The milk was brought to the milk laboratory in serial number. The name of the dairy was withheld. It was collected by an officer at an unexpected time, of his own choosing. Except where

will be seen that of the 49 dairies examined the fat percentage was 4 or above 4 in 25, and that in 9 of these it was above 5. Seven were between  $3\frac{1}{2}$  and 4, eight were below  $3\frac{1}{2}$  and 2 of these were 3 per cent. One dairy furnished a 10 per cent milk, this was too high for good milk and too low for good cream. It was reported as cream below standard. It was subsequently found that the high percentage of fat was due to an attempt to deceive the Board of

TABLE A

Dairy No.	Per Cent. Fat in Whole Milk	Specific Gravity.	Total Acidity	Dairy No.	Per Cent. Fat in Whole Milk	Specific Gravity	Total Acidity
1	4.1	1032	26	25	5.5	1030	25
2	4.2	1038	28	26	4.0	1031	28
3	4.1	1032	24	29	3.8	1032	24
4	4.0	1030	26	30	3.6	1030	
5	3.3	1031	26	31	3.8	1032	
6	4.2	1034	28	32	4.2	1032	
7	3.6	1032	25	33	6.3	1026	
8	3.8	1032	30	34	3.2	1034	
9	4.0	1032	26	35	5.0	1030	
10	3.0	1036	28	36	3.0	1032	
11	4.8	1032	24	40	3.8	1032	24
12	4.0	1034	24	41	5.6	1032	24
13	4.0	1034	24	42	3.2	1034	22
14	5.2	1034	22	43	4.2	1032	25
15	3.6	1034	20	44	5.2	1032	24
16	3.6	1032	26	45	4.0	1034	27
17	3.2	1034	28	46	4.0	1032	25
18	4.2	1034	30	47	5.0	1032	25
19	3.2	1036	24	48	4.4	1034	25
20	3.4	1034	26	49	4.4	1033	24
21	5.5	1031	26	50	3.8	1032	24
22	5.0	1032	25.5	51	4.8	1033	24
23	4.5	1032	28	52	5.2	1031	26
24	4.5	1033	29				

otherwise stated the milk was bottled at the dairy and not taken from the tanks in the milk wagon.

The analysis of this series has to do only with the percent of fat in the whole milk, the specific gravity, and the total acidity. We have considered standard milk one which has 4 per cent fat, a specific gravity of 1028 to 1033, and a total acidity not higher than 25. The results of the analyses are as shown in table A. By reference to this table it

Health, which had had trouble with this dairy before.

The specific gravity varied proportionately with the fat in most cases. It is interesting to note that in the milk of herds in which the inspector found mammary and udder disease, the total acidity was high, always 28 or above. Invariably when the acidity was much above 25 it could be traced to dirty stables, dirty cows and careless milking methods. The trouble has been in the stables and in

the milker. It is of very little avail that the housekeeper puts the milk in a cool place, protects it from all contamination, if from the time it leaves the udder until it reaches the consumer, it has been through a course of dirt collection from unclean hands, unclean pails, unclean tanks, etc. This journey through unclean receptacles is too frequently evidenced by the visible sediment that greets the eye as the bottom of the container is reached.

We found through the investigation of the Board of Health that the usual plan of dispensing milk is as follows: All bottled milk is taken from the previous evening's milking, that, that is not bottled is carried in the faucet tank in the front compartment of the wagon. All milk taken from the cows in the morning is put into ordinary cans.

It must be evident to every one that bottled milk, even though it is of the night milking, stands a better chance of reaching the consumer in good condition than milk that is put in the faucet tank or in ordinary cans. It must be a very difficult task to keep the tanks and the can clean, even when the strictest measures of cleanliness are observed. How great the chances of contamination when no special thought is given to them! Picture the bacteria that may lurk in the seams of the can and the bottom where it is impossible to reach with hand and brush!

After counseling with the Board of Health we decided that for the present, until more elaborate methods can be carried out, to prove the value of these simple methods, that standard milk must contain 4 per cent fat, and have an acidity not above 25 per cent decinor-

mal sodium hydroxide solution.

We have found that by notification and instructions to the dairymen that the high acid values in the milk have been lowered. We find most of the milkmen anxious to co-operate as best they can, and a visit to the various dairies in this district demonstrated to us that much of the faulty condition was due to their lack of knowledge of bacterial growth. The condition in the milk rooms was for the most part fairly good, but in the stables no efforts were put forth to secure the cleanliness that is so essential. The amount of good that can be accomplished by local boards of health can not be over estimated. *When the public begin to realize that by far the greater number of deaths in infants and young children, rich and poor alike, are due to diseases of the digestive organs and that these are caused by impure milk, greater efforts will be put forth to bring about conditions that will compel dairymen to have regulation stables and produce standard milk.*

If only common cleanliness could be guaranteed, thousands of infants' lives could be saved yearly. Sterilization will not accomplish as much as is expected of it. Germs kill not only by invading the tissues of the body, but also by elaborating chemical poisons in the milk, which are unaffected by either Pasteurization or sterilization. We must have clean milk. If health officers were better paid and were obliged to qualify for office by competitive examination, before an unbiased board, much of the difficulty would be solved.

Taking all things into consideration the above analyses show that the milk supplied to Ann Arbor is on the whole



good so far as its fat content is concerned. We have examined the milks of some of the dairies, particularly Nos. 1 and 6, at various times for two or three years and have never found the fat per cent below four. They have frequently been dirty, and at these times their acidities have been high. The dairies around Ann Arbor represent the prevailing type. They are probably no better and no worse than those in other districts. The milk that is being delivered is physically good, is seldom skimmed or diluted. Lowered fat percentages can usually be traced to improper and poor feeding, in but few instances to diluting.

**Milk Analysis:** Practical milk analysis resolves itself into the estimation of but a few points. Without these no milk modification can be correct. The possession of more minute data will help us but very little. Even methods that are thought to be most ideal are only approximate. We have then to estimate the per cent of fat in the whole milk and in the cream, the specific gravity, and if we would have the alkalinity correct, the total acidity should be known. However, for practical purposes, this is not necessary and the total acid value may be employed as a means of gaining some idea of the cleanliness of the product used.

Fat estimation requires about ten minutes' times. The most reliable test is the Babcock test. Small hand-turning testers are manufactured by various creamery manufacturing companies. A whole outfit can be bought for a small sum, including directions which are too familiar to you all to require repetition here. All fat estimation reported in this paper

was made with a large electric centrifuge.

The approximate percentage of proteids is estimated by comparison of specific gravity with fat per cent. The proteids of milk are fairly constant, more constant than fat. They are estimated at 4 per cent. If the specific gravity is low, the fat per cent high, the proteids are normal. If the fat per cent is normal or high and the specific gravity high, the proteids are increased. If the fat per cent is normal or low and the specific gravity is low, the per cent of proteid is decreased. It is more necessary to be in possession of definite fat percentages than of proteid.

The symptoms of proteid excess are much more evident than are those of fat excess. The stools may be used as an index of proteid digestion, yet it must be remembered that infants may thrive and manifest no complaints and still show curds in the stools. This symptom alone does not necessarily mean that our casein must be decreased. It must be combined with other phenomena which go to make up the symptom complex of proteid indigestion.

Sugar in cow's milk for practical purposes may be considered as a constant factor, varying little from 6 per cent. The polariscopic method for sugar estimation is the most practical and is very accurate.

Knowing the percentage of fat in the whole milk and in the cream, it is a very simple matter to calculate the quantity necessary to give the required amounts. We find Baner's method of great practical value. It is simple and gives fairly accurate results. We think as accurate results can be obtained by

home modification with this method as are usually obtained by Walker-Gordon laboratories, and it is much better from the standpoint of independence, as there is no patent upon it.

Percentage feeding resolves itself into so simple an algebraic expression that any one mathematically inclined can devise equations of his own, if he cares to. Those who do not wish to spend time working out equations of their own can accept this method and have the assurance that they will obtain good results. Possibly its only point of failure is in the calculation of low proteid percentages, but this applies only when low per cent top milk fat is employed. The method is as follows:

BANER'S METHOD.

Let Q represent the quantity of mixture required for 24 hours.  
F represent the desired per cent. of fat.  
P represent the desired per cent. of proteid.  
S% represent the desired per cent. of sugar.  
A represent the desired per cent. of lime water.  
C = Cream. M = Milk. W = Water. LW = Lime Water. S = Sugar.

It will be found that

$$\frac{Q}{\text{ \% of fat in cream} - 4} \times (F - P) = \text{Cream in ounces.}$$
$$\frac{Q \times P}{4} - C = \text{Milk in ounces.}$$
$$\frac{A}{100} \times Q = \text{Lime water in ounces.}$$
$$Q - (C + M + LW) = \text{Water in ounces.}$$
$$\frac{S\% - P}{\phantom{Q}} \times Q = \text{Sugar in ounces.}$$

Example:—A mixture of 48 ounces containing 3% fat, 1.5% proteid, 6% sugar, and 5% lime water is desired. The whole milk is known to contain 4% fat, and the cream, upper 4 ounces, after standing 4 hours, 16% fat.

$$C = \frac{48}{16 - 4} \times (3 - 1.5) = 6 \text{ ounces.}$$
$$M = \frac{48 \times 1.5}{4} - C = 12 \text{ ounces.}$$
$$LW = \frac{5}{100} \times Q = 2.4 \text{ ounces.}$$
$$W = 48 - (6 + 12 + 2.4) = 27.6 \text{ ounces.}$$
$$S = \frac{6 - 1.5}{100} \times 48 = 2.1 \text{ ounces.}$$

These equations assume that the whole milk contains 4 per cent fat and 4 per cent proteid. In order to use the formulae with exact results we must substitute the actual per cent of fat in both cream and whole milk,—for instance, if milk tests 4.5 or 5 per cent fat, the cream will test about 18 per cent fat. After having run a number of tests we are satisfied that most milk containing 4 per cent fat will not show greater than 16 per cent fat in the upper four ounces of cream.

The following case illustrates how near the desired amount of fat is obtained by these equations. See table B, Baby F.

An 18-ounce mixture, of 2 per cent fat, ½ per cent proteid, 6 per cent sugar, 5 per cent lime water was required. The modification was made according to the equations already given,—the modified milk was then tested for its fat per cent, with the result that in thirteen days the average fat was 1.99 per cent. We could hardly look for more accurate results than these. Our method of separating the upper four ounces, was one that every busy mother would probably use. We simply poured off the top milk or cream, our object being to test a home method of modification that would be within the range or ability of any household. We find that the percentage of fat by this method does not differ from that obtained by use of the siphon.

The percentage of fat in the whole milk of herds will necessarily vary with the conditions existing at different times of the year, and while it is not necessary to make daily fat estimations, they should be made at more or less frequent intervals, particularly if the infant shows

signs of digestive derangement.

We have made a few observations (Table D) on the depth of the cream layer, after standing four hours, with relation to the

the cream layer is a certain depth. When the depth was  $33 \frac{1}{3}$  per cent of the bottle depth, the per cent of fat in the whole milk averaged about 4; when the cream depth

TABLE B  
BABY F  
HOSPITAL MODIFICATIONS

Date	Quantity	Fat Per Cent.	Sugar Per Cent.	Proteid Per Cent.	Lime water Per Cent.	Fat Per Cent. In Modification
4-1-06	18 oz.	2	6	0.5	5	2
4-2-06	18 oz.					1.9
4-3-06	18 oz.					2.1
4-4-06	18 oz.					2.
4-5-06	18 oz.					2.
4-6-06	18 oz.					1.6
4-7-06	18 oz.					2.2
4-8-06	18 oz.					2.
4-9-06	18 oz.					2.1
4-10-06	18 oz.					2.
4-11-06	22.5 oz.	2	6	1 (whey)	5	2.
4-12-06	22.5 oz.					2.
4-13-06	22.5 oz.					2.
						Average 1.99

BABY A

Date	Quantity	Fat Per Cent.	Sugar Per Cent.	Proteid Per Cent.	Lime water Per Cent.	Fat Per Cent. In Modification
5-16-06	36 oz.	2	6	0.5	5	2
5-19-06	48 oz.	3	6	1.0	5	3
5-20-06	56 oz.	3	6	1.0	5	2.6
5-21-06	56 oz.	3	6	1.0	5	2.8
5-24-06	56 oz.	3	6	1.0	5	3.
5-27-06	56 oz.	3	6	1.0	5	2.8
5-28-06	56 oz.	3	6	1.0	5	2.6
5-29-06	56 oz.	3	6	1.0	5	3.0

BABY McD  
HOSPITAL MODIFICATIONS

Date	Quantity	Fat Per Cent.	Sugar Per Cent.	Proteid Per Cent.	Lime water Per Cent.	Fat Per Cent. In Modification
5-8-06	48 oz.	2.5	6.0	0.5	1	2.5
5-9-06		2.5	6.0	0.5	1	2.5
5-10-06		2.5	6.0	0.5	1	2.4
						Average 2.46

BABY K  
HOSPITAL MODIFICATIONS

Date	Quantity	Fat Per Cent.	Sugar Per Cent.	Proteid Per Cent.	Lime water Per Cent.	Fat Per Cent. In Modification
5-8-06	18 oz.	2	6	0.5	5	2.
5-9-06	18 oz.	2	6	0.5	5	1.8
5-10-06	18 oz.	2	6	0.5	5	2.
						Average 1.93

HOME MODIFICATIONS

Date	Quantity	Fat Per Cent.	Sugar Per Cent.	Proteid Per Cent.	Lime water Per Cent.	Fat Per Cent. In Modification
5-11-06	Mrs. S.	2	6.0	0.5	5	2.
5-11-06	Mrs. B	2	6.0	1.0	5	1.9

fat content of the whole milk. A regulation bottle, allowed to stand four hours, after being thoroughly mixed, will show a more or less definite fat per cent when

was 35 to 37 per cent of the bottle depth, the fat per cent averaged 5. This, too, can be used with fairly accurate results in home modification.



To vary the percentage of fat, it is necessary to use different layers of the milk. When the upper 4 ounces contain approximately 16 per cent fat, the second 4 ounces will yield 6 per cent fat, the third 4 ounces, 4 per cent fat, and the fourth 4 ounces 3 per cent fat, so that by simply pouring off the top in definite amounts almost any desired per cent of fat content may be obtained. By using the upper 8, 12 or 16 ounces, we may get fat per cents of approximately

cream distributed in this section. If creams of definite percentages were placed on the market, we can see that a great advantage would be secured. There seems to be no effort in this direction in the smaller towns, and unless the fat per cent in cream is estimated very frequently, disordered digestion will surely arise.

Our method of removing different layers of top milk after it has stood a certain length of time and thus procuring

TABLE C

Exper. Number	Fat In Whole Milk	After Standing Four Hours The Fat In The			
		Upper 4 ounces	2nd 4 ounces	3rd 4 ounces	4th 4 ounces
1	4.2	16.8			
2	4.5	16.2			
3	4.2	14.4			
4	4.8	14.4			
5	5.9	17.0			
6	4.6	14.2			
7	4.6	15.5			
8	4.9	14.0			
9	3.7	13.6			
10	5.0	18.0	6.6	4.6	4.4
11	4.8	17.2	6.0	2.0	1.8
12	5.0	18.4	6.4	3.0	2.4
13	4.6	17.2	5.4	3.4	1.6
14	4.8	17.6	6.4	4.4	2.6
15	4.0	16.0	5.8	3.4	3.0
16	4.0	16.0	5.8	4.0	3.2
17	3.8	15.4	5.2	3.8	3.4

12, 10 and 7, which are somewhat lower than the percentages claimed by Holt. There are a good many reasons why gravity cream is better than centrifugal cream, for modifications. There may be something in the objection that in centrifugal cream the natural emulsion is partially destroyed, but there is considerable difference of opinion upon this point. We think that the arguments in favor of gravity cream are that it is usually fresher and the percentage of fat more constant than in the centrifugal

more or less definite fat percentages seems to us to be far more satisfactory. Holt and others following in his lead have given examples of top milk feeding and have reported their results of analyses of the different layers of top milk. We have repeated their experiments and have been unable to produce the results obtained by them. (Table C.) Our conditions were probably different. We sought to have them the same as in the home, where the modifying is most often done. A milk that is set immediately

after milking, will, after four hours, raise a higher per cent of fat in the cream than milk that has stood for a time, then mixed and reset for four hours. The latter are the conditions that must necessarily exist in the home, where milk is obtained from a milkman some hours after milking, the time of the milking and the amount of jolting unknown. It may be for this reason that our results differ from those of other invsetigators. At no time were we

mately 16 per cent fat instead of 20 per cent, as is claimed by Holt and others.

The proteids of cow's milk differ from those of woman's milk in that the percentage of casein is greater and that of soluble albumin less. It is the casein that gives us the greatest trouble in infant feeding. It was never intended that the human animal should consume large amounts of casein. It would seem then that any method of milk modification that has as its object the elimination of

TABLE D

No.	Per Cent. Of Fat In Whole Milk	Per Cent. of Distance of Cream Level from the Top to the Bottom of a Standard Quart Bottle after Standing						
		4 hours	5 hours	6 hours	7 hours	8 hours		
1	4.2	33.						
2	4.5	33.3						
3	4.2	35.						
4	4.8	34.8						
5	5.0				39.			
6	4.6	34.3						
7	4.6	36.3						
8	3.9	31.2						
9	3.7	28.1						
10	6.2					39.1		
11	5.0	40.6	40.6	40.6				
12	4.2	32.3	33.0	33.0				
13	4.2	29.7						
14	5.1	36.0						
15	5.0	37.5						
16	4.9	28.1						
17	4.8	34.4						
18	5.0	40.6						

The average cream depth of those milks approximating 4 per cent. fat is a little less than a third of the distance from the top to the bottom of the bottle. Those approximating 5 per cent. a little over a third of the distance. (36.9).

able to obtain 20 per cent fat in the upper four ounces of a quart of milk. The highest we encountered was 18.4 per cent. Usually an average of 16 per cent was obtained. Even with 5 per cent whole milk 20 per cent cream could not be obtained by four or six hours' setting.

From our investigation we can say that a milk after being thoroughly mixed by pouring from one vessel to another, and set in a standard quart bottle will yield in the upper four ounces approxi-

excess of casein must be the most ideal. So far as we know the proteids that remain in cow's milk after the casein has been removed are identical with those of woman's milk. They are at any rate soluble albumins and require much less digestive work than do the insoluble or solid milk bodies. If then we wish to feed an infant soluble albumin, in quantities sufficient to equal the proteid content of mother's milk, it is evident that the use of whey alone which contains but 1.17 per cent proteid will

not accomplish this. To increase the content we should have to evaporate the whey, i. e., if we evaporate off the water of 20 ounces until it is reduced to 10 ounces we will have a whey containing twice the amount of proteid of the 20 ounce or 2.34 per cent proteid.

This is hardly practical for home modification, because of increased time required in the preparation, which is in reality the only objection raised by mothers against modified milk. During the first two months of life is the time when an infant most needs soluble albumin or milk that closely resembles mother's milk. We do not care to raise proteid content, during this period, above 1 per cent.

It would seem that our argument does not hold, when our constant aim has been to modify the milk of the cow to as nearly a counterpart of mother's milk as possible, for it is a well known fact that throughout the lacteal period, mother's milk never contains less than 2 per cent proteid. But we must bear in mind constantly that cow's milk can never be exactly like mother's milk, and practical experience has demonstrated to us that infants thrive on whey modifications and develop bone.

Nothing definite has been worked out with regard to the exact modification of the salts. These are reduced by dilution as are the proteids. Experiment has shown, however, that very little of the salts are lost in the making of whey, so by the use of whey in our modifications instead of water as a dilutent we increase rather than decrease our salt per cent.

Clinical experience has taught us that infants fed on modified milk do better

proportionately, as the amount of casein or solid food is gradually increased. It may be necessary to begin with simple whey, a method that has proven very satisfactory, where the child is never nursed by the mother. To feed an infant for any considerable length of time on a purely soluble albumin diet or low casein diet might easily lead to serious consequences.

To prepare soluble albumin or whey, the casein is removed most conveniently by the use of the commercial junket tablet. One tablet dissolved in a little water, added to a quart of skimmed milk, which has previously been heated to 98 deg. F., will yield from 13 to 14 ounces of whey in 15 minutes' time. The casein separates as a greenish yellow semi-opaque fluid. In separating the curds from the whey pressure should be avoided. We found a single layer of absorbent cotton worked rapidly and effectually as a filter.

The mother must be especially instructed in regard to the use of the junket tablet as the directions on the box are not for making simple whey. Trouble arises if squeezing is employed, casein passes through and the whey will have a milky look.

It must be remembered that rennet works rapidly, and like other ferments there is little limit to the duration of its action. It is still actively present in the whey, and if it comes in contact with the casein, as the casein of the cream in a milk modification, it will rapidly convert it into curds. Hence the necessity of bringing the whey to a temperature of 150 deg. F. before adding the cream. This requires but a few moments' time.

We now come to the consideration of



the accuracy of percentage milk modifications, modifications produced at milk laboratories and those produced in the hospital and home. We will consider only fat percentages, as fat is the most variable constituent of cow's milk and the one that concerns us most in infant-feeding. It is generally believed that percentage milk feeding and the term "modified milk" originated with those who were the instigators of the laboratory idea. It will be of interest to many of you to know that percentage feeding was not only worked out some time before the formation of the Walker-Gordon Company, but the ideas were given to the profession in book form by Dr. William Henry Cummings, of Williams-town, Mass., in 1859, in a little book entitled "Food for Babes or Artificial Human Milk and Manner of Preparing and Administering It to Young Children." If any of you have access to this interesting little work by Dr. Cummings and will turn to page 58, there you will find that he says, "The milk adapted for the new-born calf is not suitable for an infant. It must be *modified* or else it will do harm rather than good." He goes on to state that "there is too much cheese in cow's milk and the child can not digest it." He then accurately works out the yearly needs of a child in pounds of butter, proteid and sugar, which he estimates at 25, 17 and 90, respectively, for a year's feeding, for an average child. Then he proves the inadequacy of cow's milk as a substitute, showing that in the same quantity of milk a child would get but 16½ pounds of fat in a year's feeding, but a great increase in the casein. He further gives specific dilutions for various ages, suiting the modification to

the changes incident to development in the child.

It is said that Liebig had it so arranged that his prescriptions for infants' food, which consisted in the addition of maltose to cow's milk, were filled at an ordinary pharmacy and that other physicians patronized these places. Liebig's object was to bring about conditions that exist in woman's milk. This is another evidence of the adage, "There is nothing new under the sun," and would seem to detract from the claim of the laboratory people that they were the originators of the percentage method of feeding. However, as they have popularized this method they are entitled to the honor that should come from its general adoption.

Milk laboratories claim for their product accurate percentages and clean milk. It is upon these claims that their success depends. There has been some dissatisfaction with laboratory milk, both on the part of the profession and the laity. We think that Dr. Morse<sup>1</sup> is justified when he says that "much of the criticism has come from physicians who have failed to appreciate the purpose and capabilities of the laboratory; that some physicians seem to have found the laboratory a convenient scapegoat to account for the lack of development of certain babies, fed on laboratory milk prepared according to their own directions." "It has been much easier and more conducive to their self-respect to attribute the failure to the laboratories rather than to their own imperfect methods of prescribing," and that "the laity are inclined to exaggerate every mistake made by the laboratory and minimize their own."

<sup>1</sup>Jour. Mich. State Med. Soc. Vol. 4, 1905.

However, knowing the above to be true we cannot help being impressed with certain facts that confront us. We must stand with those who give obeisance to the sentiment, "to the law and to the testimony." Does the Walker-Gordon Company live up to its claims? By reference to Dr. Wentworth's series of analyses<sup>2</sup> of laboratory milk modification, part of which we incorporate below, it will be seen that frequently inaccurate products are dispensed.

## ADAPTED FROM DR. WENTWORTH'S REPORT

No.	Date	Formula Ordered	Formula Supplied
		Fat	Fat
1	Dec. 18, 1901	4.	4.2
2	Dec. 19, 1901	3.5	2.5
3	Dec. 19, 1901	3.	2.6
4	Dec. 20, 1901	4.	3.5
5	Dec. 20, 1901	3.5	3.2
6	Dec. 21, 1901	1.5	1.6
7	Dec. 21, 1901	4.	3.6
8	Dec. 23, 1901	3.5	2.8
9	Dec. 24, 1901	3.5	3.5
10	Dec. 24, 1901	4.	4.2
11	Dec. 25, 1901	4.	3.4
12	Dec. 26, 1901	3.5	3.2
13	Dec. 30, 1901	4.	3.4
14	Jan. 3, 1902	3.	2.2
15	Jan. 7, 1902	3.	2.6
16	Jan. 9, 1902	1.	1.
17	Jan. 15, 1902	3.	2.4
18	Jan. 23, 1902	3.	2.3
19	Jan. 24, 1902	3.	2.3
20	Jan. 27, 1902	4.	3.3
21	Jan. 29, 1902	2.	1.3
22	Feb. 28, 1902	4.	3.
23	March 7, 1902	3.5	2.
24	March 15, 1902	4.	3.1
25	March 18, 1902	4.	3.4
26	March 24, 1902	4.	3.1

Out of 26 different samples only two gave the percentage of fat prescribed (Nos. 9 and 16). One gave 1 per cent too little fat, No. 22. In 15 of those analyzed too little fat was found, an error of  $\frac{1}{2}$  per cent or more in each case. This impresses us as a difference too great for a company making such claims, especially as with but two exceptions the error was a lowering of the fat content. These experiments were made four years ago, but there ought not

to be any reason to believe that conditions at the present time are any better than they were then. The argument used against the commercial baby foods is that they do not furnish proper amounts of fat and this series of analyses seems to show that the laboratory milk is in reality little better.

The question naturally arises, where is the fault? We have no reason to think that the company's intentions are not good. In its infancy, and of late years, it has delivered milk with exact prescribed percentages. It is not at all improbable that success has brought to it, as to many prosperous business concerns, a feeling of self-security protected too by its patent, consequently carelessness has crept in, particularly on the part of the employees. One of us visited the principal Walker-Gordon laboratory in Boston last summer, in company with a lay friend. The laboratory is pictured as perfect in its appointments and immaculate in its cleanliness. What greeted the eye, however, was not even the cleanliness of a down town butcher shop, nor could we be impressed that it was sterilized uncleanness. The man at the rack was juggling prescriptions, it seemed to us, at the rate of 50 per minute. Occasionally a little milk slopped over. It did not seem to us that the care of a drug store prescription clerk was given to the combining of the various constituents of the milk modifications. A visit the same day to the Floating Hospital showed an entirely different state of affairs. There home modifications were being prepared by the physicians, nurses and mothers. Cleanliness was paramount, even though their quarters were much crowded.

<sup>2</sup>Boston Med. and Surg. Jour., June 26, 1902.

The Walker-Gordon Company had difficulty in obtaining a patent on percentage milk modification. It is generally known that it was owing to Dr. Rotch's influence that it was finally obtained. In a letter presented to the patent office at Washington by the Walker-Gordon Company, Dr. Rotch says, "It is of the greatest importance to physicians that this process should be protected in every way, as it is a question of many babies' lives being saved by it in the future. Unless protected and under careful supervision great harm may be done by the misuse of this new instrument of precision which you have placed in our hands and which the physicians of the future will surely thank you for." Dr. Rotch, the instigator of the laboratory idea, has no financial interest in the concern. He has simply been a zealous promoter of what ought to be an ideal system and has worked unselfishly.

The patent was granted, a peculiar patent, which cut off competition, the most wholesome stimulant for the promotion of superior articles. It is indeed fortunate that there can be no patent to prevent one from carrying out similar operations in the home. Our experiments with home modifications, by nurses and mothers, show that the results obtained are generally more accurate than laboratory modifications, at least so far as the fat content is concerned. The large bulk of the population is scattered through rural districts. They do not need Walker-Gordon laboratories. But they *must* have clean and uninfected milk. The medical profession and enlightened mothers can arrange the rest—patents are unnecessary. It would be hard to improve upon the Walker-Gordon milk

as it is received from their farms. The conditions at the farms are said to be excellent. The cows are well chosen and their feed carefully regulated. All the cows have been tested with the tuberculin test. This is a great advantage over the ordinary herd milk as delivered in towns. It is a question whether this high grade milk may not more than compensate for the differences in the percentages of the modified milk. There may be some good reasons for such a patent, but we fail to see the benefits to the public, to the babies, for whose benefit the patent was granted. Other concerns of great magnitude have prospered, as the Mellin's Food Company, without patents or copyrights. We think that the patent was unnecessary and has been the means of retarding the furtherance of what might be a great boon to bottle fed babies if properly controlled.

The laboratory idea is a good one, but equally good if not better results will be obtained in the rural districts by intelligent home modification. It will doubtless be only a matter of a few years before the state of Michigan through the efforts of the State Society, which represents the profession of the state, will require that all cows used for dairy purposes be proved to be free from tuberculous infection by means of the tuberculin reaction. Under present conditions we think that the dairymen are in a sense justified in objecting to the test. This objection is, of course, purely commercial. They can not appreciate why they should lose the value of a cow or part of a herd because a tuberculin reaction has been obtained. It would seem only just that the state fur-



nish cows of standard breeding to replace the diseased cows. There is no other article of food that is more generally used than milk and the various food products manufactured from milk.

There are very few infants that can not be fed on modified cow's milk if the

principles of milk modification are thoroughly comprehended by the physician. The question of the superiority of one sugar or one alkali over another is a subject worthy of much attention, but for lack of time can not be discussed here.

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### Discussion.

**Dr. J. A. Wessenger**, of Ann Arbor, in opening the discussion said: The question of milk supply at Ann Arbor has a two-fold interest to me. As health officer and under the laws of our city, it becomes my duty to see to it that the best possible milk supply is furnished by the dealer to our people. I must acknowledge most valuable assistance by our milk inspector, and also by the able corps of workers who administer the affairs of the Department of Pediatrics at the University of Michigan. These valuable charts and tables you see before you today for the first time, indicate a new line of work, never before presented before this society. The work is only in its incipiency. We hope to accomplish much as the years roll on. And as the matter comes before you, as it shall, from time to time, may it have the stamp of progress until a well nigh perfect milk supply is the rule among our rural cities.

Then again, into the very incipiency of life the problem of proper food enters. The first cry of the new-born infant is nature's utterance for sustenance. How many thousands of babies today owe their existence to artificial feeding! What a miserable existence it is many times! Will you tell me how many lives are blasted and thrown into degeneracy through the careless and improper feeding of the infant? Is it important therefore that we have a proper milk supply? The duties of the health officer along these lines are very plain therefore, and drastic measures many times become necessary. Yet I dare say that with the average health official, recompense for work done is not the motive power, he does his work on account of its importance and in disregard of the oftentimes miserable pittance he may receive.

Now if you will glance at these charts for a moment you will notice quite a marked variation in fat per cent, and also in total acidity. The requirements adopted to begin with are that the milk must contain 3.5 fat per cent and must not

be over 25 in total acidity. Whenever the product comes below these the dealer is promptly notified, the defects pointed out to him, improvements suggested and *surveillance* kept over his product. In this way we have gotten rid of the most undesirable of the dairymen. In one instance we had reason to believe the milk to be below fat requirements. I sent the inspector for a sample; just before it came into his hands the lady of the house, very slyly as she thought, added some cream to the specimen. Analysis gave 10 per cent fat which was too high for milk and much too low for cream, since the cream requirement is 20 per cent. We promptly notified this dairy that their cream was much too low and unless a better article could be furnished their license would be revoked. The trick has not been repeated by this dairy. In another case where the dairyman persisted in doing things contrary to orders we revoked his license. We next prosecuted and fined him for selling without a license. After this he cleaned his stables fairly well for a time, but he was taken with a relapse. His license was again revoked, with the result that he is permanently out of the milk business as far as the city supply is concerned.

Just a word bearing upon percentage feeding. I need hardly say that such feeding is scientific and therefore accurate; every well-informed physician knows this and should therefore practice it. In regard to milk modification, I am thoroughly satisfied that this can be carried out in every well regulated home just as well if not better than under a patent, secret system where the work is sometimes done in a very perfunctory way.

**Dr. W. E. Coates**, Manistee: My experience would not lead me to believe that the milk supply of the smaller towns is better than it is in the cities. I have found conditions about as bad as they could be and very little evidence of milk dealers showing any desire to improve conditions.

**Dr. R. S. Rowland**, Detroit: Any work like

the present paper which helps the profession and the general public to appreciate the importance of pure, clean milk and enables a city health department to improve the standard of the milk supply is to be greatly commended.

My own experience does not allow me to agree with the doctors in regard to their criticism of the milk laboratory or the statement that home modifications are more accurate and satisfactory than laboratory preparation. The first essential for an accurate modification is to know the fat percentage of the milk to be used. In home modification this can only be determined occasionally, while in the laboratory it is determined every day.

In a critical examination of percentage modifica-

tions put up in the laboratory and by nurses, I was surprised at the accuracy. The error being less than 0.2 per cent in most instances.

The chief function of the milk laboratory is to furnish pure, clean milk, safe for babies. In my opinion it has been one of the largest factors in educating the profession and laity to a proper appreciation of this point. If its standard is lived up to, the milk is modified more accurately than the average mother can do it. In regard as to which is the better way, my experience has shown me that sometimes home modification succeeds where the laboratory mixture fails, but the reverse is more often true. We owe the milk laboratories much and should be willing to admit it.

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## THE CLINICAL EXAMINATION OF THE INFANT'S STOOL\*

HERBERT M. RICH, M. D.

Detroit.

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The inspection of the sick baby's napkin by the visiting physician is usually performed as regularly and solemnly as those two other mysterious functions handed down from prehistoric members of the profession, the "feeling the pulse" and "seeing" the tongue. Of the three the examination of the stool probably gives the least information to the usual observer. This is true in spite of the fact that from Hippocrates down, infants' stools have been discussed in medical writings. The number of stools, the consistency, the color, the presence of blood, of a very foul odor, or of a gross parasite, cover about the extent of ordinary observations. One glance shows him that the child has an intestinal dis-

turbance. A dose of castor oil and a restricted diet for a day or two will settle many acute cases beautifully.

But modern times have brought their own problems, and in one of them the more careful examination of the infant's stool plays a very prominent part. The decreasing ability of white women to nurse their children has made the search for an efficient substitute food a question of world-wide importance. The enormous growth of modern cities has created conditions which interfere very seriously with the quality of fresh milk offered for public consumption. From these causes come principally digestive disturbances in infancy, and it can be positively stated that the single glance at the stool and the castor oil prescription will never succeed in curing a di-

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gestive disturbance depending upon a persistent faulty diet.

In 1899, Biedert (*Archiv. f. Kinderheilk.*) asserted that the examination of the infant's stool was the most important criterion for the determination of the nature of the digestive disturbance and the therapeutic measures to be applied. Since that time numerous observers have found that in a general way this dictum is true, and that regular and systematic examination of the stools gives information of great practical importance. This is possible because of the simple and limited diet of the infant. Knowing the characteristics of the normal stool, one can recognize the pathologic elements. If the stool indicates a disturbance of carbohydrate digestion, one has a very definite indication for successfully changing the food. The same is true of proteid indigestion, or of disturbances due to fats. If a food disagrees with a child, what can be more rational than to examine the stool and ascertain the element which has not been successfully digested and then to correct the diet with this knowledge of the disturbing factor?

Although unwise parents or nurses sometimes allow infants to eat substances which are not only useless but harmful to them, one may in general divide the food of infants into three classes: 1. Mother's milk. 2. Cow's milk and its modifications. 3. Carbohydrate prepared foods. The composition of the stool is, of course, dependent primarily upon the kind of food digested, and secondarily upon the efficiency of digestion, the length of time food remains in the canal, the bacterial flora, and such accidental elements as may be

due to the presence of disease.

While there are many things concerning the digestive processes of infancy concerning which we are ignorant, we know that the intestine of the infant is comparatively very imperfect and helpless against dietetic insults—having normally efficient digestive power for just one food—its own mother's milk. The mouth of the infant is toothless, its stomach has no fundus, and the digestive fluids are reduced in quantity.

It is believed that the albumin of mother's milk leaves the stomach practically all in solution. With plain cow's milk, on the contrary, practically all the albumin passes through the pylorus undissolved. The dissolved proteids are quickly absorbed in the intestines, and to this fact is due the absence of foul odors from the stool of the normal breast-fed child, while from the delayed absorption and the presence of proteid in the intestine come the alkaline reaction and slight putrefactive odor of the normal stool from cow's milk.

A recent stool is desirable for examination. One can often be obtained by the insertion of a soap suppository. If passed in the physician's presence, he can observe the force with which the feces are expelled, the presence of gas, the proportion of fluid, and the odor—all important points. If the mother is fairly intelligent, however, one can usually obtain much of this information from her. Fortunately the other essential characteristics of the stool are fairly well preserved if left in the original diaper. This is the usual form in which the stool is seen by the physician, and a systematic examination may be carried out in something like the following manner:



1. Careful macroscopic inspection.
2. Get the odor carefully. This will often put one on the track of the cause of the disturbance at once.
3. Crush a lump and determine color and consistence.
4. Moisten a teasing needle in the center of a bolus and rub it over both red and blue litmus.
5. Mount a small bit under a cover-glass. After inspecting this with a low-power one may verify the presence of fat by, 1, heating the slide; 2, adding osmic acid; or, 3, adding ether. Starch granules may be shown in a second slide by staining with Lugol's solution.

By *inspection* one determines the general character of the stool, uniformity, proportion of fluid, presence of foreign bodies, parasites, food remains, mucus, and blood. Of these it will only be mentioned in passing that excepting the meconium, mucus is never normally present in a child's stool barring a barely visible network over the surface of a hard fecal mass. If blood is present it is of great importance to determine the source.

*The odor* is often pathognomonic, when a child's diet is confined to one of the three sources before mentioned. The normal breast stool has an aromatic odor not unpleasant, and quite characteristic. The normal cow's milk stool has always a slightly fecal odor. On a carbohydrate diet, the odor is rather sour. By combined methods of feeding the odors naturally fail to be characteristic and all degrees between the normal and pathologic conditions occur.

*Color*—The color of a stool is to be judged from the central part of a fresh movement. The changes in tint which often occur on the surface after a stool has been standing have no pathologic significance. If the green is from chromatic bacteria, it will be decolorized by a drop of strong nitric acid. On the other hand, if the green be due to unchanged bile, the addition of nitric acid will afford the usual display of colors familiar in urinary tests for bile.<sup>1</sup>

Meconium is dark brownish green. The normal stool of a breast-fed child is a golden yellow, often a decided orange tint, if the fat percentage be high; cow's milk, whitish yellow; carbohydrates, brownish yellow; strongly dextrinized foods, brown. The color may be influenced by the presence of blood or by drugs, such as calomel, tannin, tannigen, charcoal, dyes, etc.

A frequent appearance in bowel disturbances of all sorts is green color. This is caused by the change of bilirubin to biliverdin, and is usually associated with accelerated peristaltic movements. It has been variously ascribed to the chromogenic action of bacteria,<sup>2</sup> to increased acids, to a strong alkaline reaction in the small bowel, and to an oxidizing ferment.<sup>3</sup>

*Consistency*.—The normal stool of the breast-fed child is uniformly soft and semi-fluid in character. From cow's milk, well digested, one gets a less fluid stool with a somewhat doughy consistence. On a carbohydrate diet, the normal stool has the consistence of a thick soup or

1. Cotton: Medical Diseases of Infancy and Childhood, 1906.

2. Vaughan: Keating's Encyl. of Dis. of Children, Vol. IV.

3. Wernstadt: Monat's Kinderh., 1905.

purée. The greater the percentage of maltose, however, the thinner will be the stool. If much unchanged starch is fed, the stool may be even firmer than that of cow's milk. Formed stools are common with cow's milk, but not with the other foods.

*Reaction.*—Normally the stool of a breast-fed child is slightly acid, and if strongly acid or alkaline, trouble may be confidently predicted even if a child seems well. The normal cow's milk stool gives a slightly alkaline test.

*Microscopic Examination.*—The unit of proteid food-remains in the infant's stool is the casein islet ("caseingerinsel") which consists of casein or mucus usually mixed with fat and salts. The yellow or brown, so-called "Nothnagel's Kernels," occur frequently in normal stools, and seem to have no pathologic significance.

Fat occurs as neutral fat, free fatty acids, and saponified fat. Neutral fat is in drop form varying in size, and when present in considerable amount may be seen as "lakelets," or in the form of a stick of sealing wax. It may be stained black with osmic acid or be liquefied by heat, as mentioned before. Free fatty acid needles may also be found. The normal stool of a cow's milk diet does not contain fatty acids and irregular forms.

The only microscopic evidence of carbohydrates is the typical layer form of the starch-kernel, which is stained blue with iodine. In the normal stool no unchanged starch is found.

Various other crystals are found in infants' stools, particularly lime salts of organic acids, triple phosphates, chole-

sterin, etc. So far as we know they have no pathologic significance.

Bacteria predominate in the microscopic picture of the infant's stool. Strassburger has shown (Selter) that one-third the dry content of a stool may consist of bacteria, and in disease this proportion may be doubled. Their identification is, of course, often very difficult, and the part they play is a very complex and still unsettled question. Fortunately, so far as purely digestive disturbances are concerned, the diagnosis can be made without a bacteriologic examination, and this will not be discussed here.

As in adult dyspepsia, the key to a successful treatment of infantile indigestions lies in the diet. The logical procedure is to find the offending element in the food and eliminate or reduce it. The stool examination enables us to do this in many cases with considerable accuracy. If food elements or their division products, which experience has taught us to regard as pathologic, appear in the stools (whether from failure to be absorbed or from failure to be digested) we are able to cause the disappearance of the pathologic products by withdrawing that element of the food.

Indigestion in infancy may be marked by diarrhea or constipation. If it begins with the latter, sooner or later it is pretty sure to alternate with a diarrhea. More than three movements a day after the fourth day is usually a true diarrhea. The fact that infantile digestion occurs almost entirely in the small bowel is supposed to account for the diarrhea which sooner or later always appears in these difficulties. When the bowel is extremely irritated one may get dis-

charges consisting almost entirely of mucus and fluid. This form usually follows, but may precede, the defection of offending food material. It is, of course, from the stool containing food remains that one obtains the most information.

In *proteid indigestion* the typical stool contains formed and unformed elements. The formed part is usually white, quite brittle, in small lumps and readily crushes down into small curd-like particles. Where putrefactive processes have been continued for some time, as in the stools immediately following constipation, the consistency may resemble that of fluid cheese. The stool has an extremely foul odor, which is often distinctive. The reaction is strongly alkaline in the early stages. The unformed part is often green.

In *fat diarrhea* one finds a greasy, soapy, shining stool with a peculiar odor resembling rancid butter. The color of stools with excess of fat in breast-fed children is a deep orange; this becomes paler with cow's milk and may be affected, of course, by the presence of other food remains in the stool. The diagnosis is easily made microscopically when one finds fat in one or more of the various forms previously mentioned. The reaction is acid.

When the *carbohydrates* are undigested the disturbance is usually accompanied by a large amount of intestinal gas. This will appear mixed with the stool giving a foamy, splashy appearance which is quite characteristic. The odor is sour; the color is often brown. The reaction is acid. If the food contains an excess of carbohydrate, or starch, which the digestive processes fail to entirely dextrinize, one will sometimes get

an exceedingly hard and brittle stool—the hardest stool one ordinarily finds. This is only in the absence of any large number of fermentative organisms and is usually soon succeeded by the splashy stool already described.

Microscopically, one can demonstrate the typical layer form of the starch granules. These ought not to be present at all in a normal stool. In severe cases one will get heavy deposits of mucus and watery stools often squirted from the bowel with considerable force.

Any of these stools may be accompanied by discharges of mucus—in fact not infrequently stools consist entirely of mucus. The thick fluid, viscid, almost stringy stools of homogeneous material usually prove to be largely composed of mucus and fat. Macroscopic mucus in a stool always indicates irritation of the bowel wall.

As a matter of fact, failure of digestion of one element of food will often interfere with the proper digestion of other elements, and more than one may be at fault. The child may have intestinal symptoms from over-feeding or from malnutrition. The least information is obtained from the stool examination in the mixed cases and late stages. One of the uses of this stool examination is in beginning to feed a child recovering from a digestive disorder. By observation of the stool one may determine which elements of food are well borne and which are managed with difficulty.

In accordance with the information obtained from the plan here described, a useful clinical classification of infant diarrheas, which contains the sugges-



tions of more than one writer, would be as follows:

I. *Dyspeptic diarrheas*—

1. Inefficient proteid digestion.
2. Inefficient fat digestion.
3. Inefficient carbohydrate digestion.
4. Combinations of 1, 2 and 3.

II. *Acute Milk Infections*—

Including infectious dysentery, cholera infantum, "blue bacillus" and "streptococcus diarrhea," amoebic dysentery, etc.

III. *Affections of bowel wall*—

Follicular enteritis, ulcerative colitis, etc., rickets, infantile atrophy, tuberculosis, etc.

The logical incompleteness of this classification is fully realized, but as no complete logical and useful classification is possible with our present knowledge,

we must do temporarily with a faulty one. The pathology and bacteriology as worked out at present do not afford any immediate bedside therapeutic help. Vaughan wrote (*Am. Text. Dis. Chil.* p. 479), some years ago: 'It would be as unscientific to attempt a classification of the diarrheas of infancy founded upon pathological anatomy, as it would be to designate acute, sub-acute, and chronic arsenical poisoning as desquamative, catarrhal and ulcerative gastro-enteritis.'

With these facts in mind and remembering that these various conditions may merge into each other, it is believed that the above mentioned classification will be found practically useful and therapeutically suggestive at the bedside.

In conclusion, the author begs to acknowledge his special indebtedness to Schmidt and Strassburger's *Feces des Menschen*, and to Selter's monograph on *The Value of the Stool Examination in the Diarrheas of Infants*.

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## DISCUSSION.

**Dr. T. B. Cooley, Detroit:** I am very glad that Dr. Rich has brought this subject before us, because I consider it of great importance, and also because it is most surprisingly neglected in the American pediatric literature. One finds occasional references to special appearances in the stools, but I do not remember anything concerning a systematic routine examination of them in any of our standard text books. I have nothing to add to what Dr. Rich has said, except that it requires considerable experience in feces examination to enable one to discriminate accurately between the normal and abnormal; and the various kinds of abnormalities—especially in the microscopic examination. Certain gross abnormalities in consistency, color and odor are comparatively easy to recognize and with a little practice one learns the sharp, sour smell of the fat

stool, and its peculiar glistening surface, in the lumps of undigested casein, the strong fecal odor and the excessive alkalinity of proteid indigestion, etc., but the determination of lesser grades of disturbance by microscopic examination is not so easy and requires a certain amount of experience and knowledge. A certain proportion of undigested casein and fat is to be met with in stools that are essentially normal and the microscopic recognition of what is pathologic in a given case can not readily be made by the untrained observer. This stool examination is, however, the most exact and scientific means of diagnosis in most disorders of digestion and should be understood and practiced as a routine procedure by every pediatricist.

I should like to add a few words on another subject which seems to me unduly neglected in

American pediatric practice—namely, the adjustment of the food to the caloric requirements of the infant in proportion to its weight. Great stress is laid upon this point in most of the foreign schools, notably those of Heubner and Biedert, and its importance is so obvious that I cannot understand why, with our exact system of percentage modification, which is far the simplest method for the proper modification of the milk, our books and literature should be almost wholly silent regarding the scientific method of determining the amount of any particular modification that is required for a child of a given weight. Undoubtedly some of our pediatricists understand and practice the principles involved, but it seems to me to be altogether too common to fix upon a modification supposed to be suited to the child's digestion and to regulate the quantity by guess-work, by the child's appetite, or by the amount usually taken by a child of that age. The result is most commonly over-feeding, though sometimes the opposite occurs. I was interested lately in computing the caloric equivalents of the milk prescriptions used in a series of not very success-

ful feeding cases by men who had had a considerable experience in pediatric practice.

The caloric requirements of the infant are usually said to be from 100 to 120 C. per kg. of body weight. Out of ten of these cases which came under my observation no one was receiving an amount of food corresponding to this requirement. Eight were receiving daily from 130 to 200 C. per kg., while the other two received between 80 and 100. It seems to me quite as important that the amount of the food should be adapted to the child's requirements as that the proportions of the different food principles should be correctly adjusted, and in this respect, as well as in respect to feces examination, I think the German practice distinctly in advance of ours. It is a matter of rather complicated calculations to reduce our ounces and pounds to calories and kilograms, and for this reason I have constructed a table showing the caloric equivalents per ounce of the more commonly used modifications, as well as the kilogram equivalents of all weights up to twenty pounds. Once made, such a table is of great use.

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## THE USE OF LOCAL ANESTHESIA IN THE TREATMENT OF RECTAL AND ANAL DISEASE\*

BY LOUIS J. HIRSCHMAN, M. D.

Detroit

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If there is any one department of surgery which has made great progress in the last few years, it is in the production of local anesthesia. Formerly whenever any operative procedure was deemed necessary, either no anesthetic whatever was employed or else the patient was subjected to the dread, discomfort and mayhap danger of general anesthesia.

Constitutional diseases, age, and the patient's dread of the loss of consciousness, however, caused surgeons to cast

about for some good substitute for general anesthesia in suitable cases. Of course the use of cocain as a local anesthetic has been somewhat generally employed for several decades, but only in the most minor procedures and in certain special lines of work. Within the last five years, however, the use of local anesthesia has been gaining ground rapidly. Beside the simpler operations in the realms of ophthalmology, laryngology and genito-urinary surgery, many major operations such as exploratory laparotomy, herni-

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otomy, colostomy, thyroidectomy and various amputations have been successfully performed without the use of a general anesthetic agent.

In proctologic surgery the use of local anesthesia has had a most widespread influence and is responsible in no small degree for the great progress made by this specialty in recent years. The patient who is suffering from rectal or anal disease, the most common of which is "piles," has, by judicious newspaper advertising, on the part of the nostrum vendor and the quack, been educated to a dread of the knife, or any so-called operative measure. The great dread of the patient has been, not so much the actual operation as the fear of the general anesthetic; and, preying upon the patient's abhorrence of general anesthesia, the unscrupulous and the irregular practitioner has subjected many an unfortunate to the long drawn out torture of the so-called "injection treatment," when a mere clean cut radical operation, under local anesthesia, would have relieved the patient in a fraction of the time and with fractional expense and suffering. The suggestion of general anesthesia, operation in the hospital and confinement to bed in not a small number of cases alarms the patient so much that treatment is rejected, and the patient passes into the hands of the quack and the charlatan with his so-called non-operative sure cures. With local anesthesia the patient can be operated upon at his home or in your office, and in a great many instances without detention from business and without confinement to bed.

Local anesthesia is of the greatest assistance, not only in operative proce-

dures in office work, but also as a preliminary to local treatment work. The sphincters can be successfully and satisfactorily dilated under local anesthesia, and this in itself is a great step in advance in ano-rectal work. Tuttle, of New York, first demonstrated that the injection of twenty to thirty minims of a half per cent solution of cocain into the sphincter muscles at the point of entrance of the lesser sphincterian nerves, just on either side of the posterior commissure, will enable us to dilate this muscle, as much as is necessary for all practical purposes, with comparatively no pain. This does not mean that the sphincter can be divulsed as under a general anesthetic, but it can be stretched sufficiently to enable us to do a great many anal and rectal operations with comparatively no pain, either at the time of operation or following it. Having had two or three rather alarming experiences following the injection and application of cocain solutions in the office treatment of rectal and anal disease, I have discarded, to a large extent, its use, and I find weak solutions of beta-eucain lactate, chloretone or alypin anesthetizes fully as well, and their absorption produces no tangible toxic effect. In suitable cases distension anesthesia by the injection into the tissues of sterile water or salt solution is entirely feasible, and has proved very satisfactory in my hands in about 60 cases. Of course one must choose his cases. Internal hemorrhoids, external hemorrhoids and thrombotic hemorrhoids, polypi and fissures, when not surrounded by large infiltrated tissue or old scar, as well as tumors of the buttocks, in fact any condition which is situated in tis-



sues which can be distended to whiteness can be successfully operated upon under distension anesthesia.

Operations which require cutting into the deeper structures, however, are not amenable to this form of anesthesia. Mild solutions of eucain, for instance a quarter of one per cent. solution, or a saturated solution of chloretone, has proved very satisfactory in the deeper operations.

Dilatation of the sphincter for purposes of examination or as a preliminary to other operative procedure, can be done equally well under the distension anesthesia with mild solutions of these various anesthetic drugs as under the injection of the one-half per cent. solution of cocain.

The technic of this procedure is, briefly, as follows: The graduated glass syringe, which is connected with a long fine needle by means of a one-half inch piece of rubber tubing, is filled with the anesthetic solution. A point about one-half inch back of the outer edge of the posterior commissure of the sphincter muscles is selected. The needle is passed inward and upward to each side of the sphincter in a Y shaped or V shaped direction for one-half to three-quarters of an inch, keeping from one-half to five-eighths of an inch from the inner border of the sphincter. The solution is injected until distension is produced, when the sphincteric nerves will be anesthetized. The injection should be made slowly and a minute or two allowed to elapse before distension is commenced; then slowly with a kneading motion, with the fingers, stretch the sphincter. It is important that this procedure should not be done hastily, as it

is not necessary to rupture the muscular fibres in order to sufficiently stretch the sphincters.

Internal hemorrhoids, prolapsed mucous membrane and polypi can be brought down and distended by either sterile water or weak anesthetic solutions and removed either by the ligature or by excision, either with or without the clamp and cautery. Fissures can be successfully incised or dissected out after distension, ulcers cauterized, hypertrophied papillae distended and removed; in fact, any intra-rectal operation in which the tissues can be successfully filled with anesthetic solution can be done by local anesthesia. External skin tags, simple fistulae, and thrombotic hemorrhoids can be dealt with in a like manner, provided always that the tissues are distended to whiteness; for without distension, we do not get complete anesthesia.

It is necessary in order to successfully do surgery in this region under local anesthesia, to operate with great rapidity. One should be equipped with the proper instruments and should employ the simplest technic consistent with good work, and no operation under local anesthesia should exceed twenty minutes' duration. One should not do surgical work of this nature in his office unless he has a properly equipped operating room with sterilizers, aseptic operating table and furniture, and everything which is necessary for modern thorough aseptic surgery.

In local treatment work and examinations, a tight and sensitive sphincter can be anesthetized, as above outlined, and treatment given in a pleasant and painless manner. In the author's special work

along this line, both in office work and hospital service, he has used local anesthesia hundreds of times with almost uniform success. In not over a dozen cases has it been necessary to administer a general anesthetic to complete any operative procedure, and that usually where the patient was more frightened than hurt.

I have successfully done exploratory

laparotomies, colostomy and the closure of the temporary artificial anus under local anesthesia with very satisfactory results. In fact, so much has been accomplished under local anesthesia that the administration of a general anesthetic in the line of anal and rectal surgery is almost the exception instead of the rule.

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#### Discussion.

**Dr. W. L. Dickinson**, Saginaw: It is advisable in operating for fistula in ano to give a general anesthetic because there may be found several tracts which require an extensive dissection. Rectal work under local anesthesia is sometimes not entirely painless, but as a rule is satisfactory.

**Dr. Edwin Elliott**, Chesaning, spoke of difficulty he had had in dilating the sphincter under local anesthesia; perhaps it was because he had

not always distended the tissues to whiteness.

**Dr. H. O. Walker**, Detroit, had injected powdered cocaine or eucaine into the spinal cord for prostatectomies. Local anesthesia should be used more.

**Dr. Hirschman**: Sphincter cannot usually be fully divulsed under local anesthesia without some pain, but for most procedures it is not necessary to dilate beyond the point at which pain is felt.

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**The Lenhartz Treatment of Gastric Ulcer at the Eppendorfer Krankenhaus.**—**HABERMAN**, in describing the Lenhartz treatment, says that this investigator, in his search for a diet for cases of gastric ulcer, tried concentrated egg-albumin diet. It was especially desired to combat the hyperchlorhydria, reinforcing at the same time the enfeebled and anemic condition of the patient. The concentrated egg-albumin diet after being tried in many cases, was followed by such excellent results that this method became the routine hospital treatment at the Eppendorfer Krankenhaus. The writer gives the following tabulated treatment of gastric ulcer: Absolute rest in bed for at least four weeks; avoidance of all mental excitement; the almost continual use of an ice-bag over the stomach for two weeks; the administration of between 200 and 300 c. c. of iced milk, given in spoonfuls and two to four beaten eggs; the administration, for ten days, of 2.0 g. of bismuth subnitrate at a dose. The eggs are beaten up entire, with a little sugar and the dish containing them is placed in a receptacle filled with ice; sometimes a little wine is added. This food at once "binds" the supersecretive acid, mitigates the

pain, and causes the vomiting to cease. After a few days some raw chopped meat is given. In the third week quite a mixed diet is allowable.—*Medical Record*, June 16, 1906.

**Kidney Fixation.**—From his experience with the operation, **J. H. CARSTENS**, Detroit, Mich. concludes that movable kidneys can be permanently fixed by proper technic. A correct diagnosis must be made prior to operation, and any reasonable doubt as to the kidney being the cause of the trouble must be removed. Of course operation can not relieve such organic conditions as gastric cancer, bowel obstructions, etc. He gives a condensed report of twenty-five cases occurring in his practice which he thinks ought to give a fair average of general results. In all cases the kidney remained in place. He also found that fixing a loose kidney and decapsulating it pretty thoroughly, relieves, he thinks he might say cures, the early stages of Bright's disease. He has never lost a case, and thinks the mortality should be absolutely *nil*. He keeps the patient in bed 15 or 16 days and allows them to leave the hospital in three weeks.—*J. A. M. A.*, May 12, 1906.

## MEDICAL INSPECTION OF SCHOOLS\*

ELLIOTT KENT HERDMAN, M. D.

Ann Arbor.

The existence of disease is more profitable to the physician than its dissipation; and yet the members of our profession who discover a prophylactic rather than a curative measure are the men who are best suited to guard the physical welfare of their fellow-men. And in this age, all recognize that the *great* effort should be to *prevent* rather than cure disease.

Medical inspection of schools is a marked stride in modern sanitation and education, for it not only means establishing and preserving the health of this, but of the coming generation. The government of this and other states makes it compulsory for a child to attend the public school, and should therefore supervise the physical welfare, as well as the mental improvement and development of the child.

The paramount importance of proper and well regulated school life is therefore clearly apparent and modern educators should appreciate that because of the responsible position occupied by them, it is their duty to carefully guard the body as well as the mind of the youthful generation entrusted to their charge, because many of the distressing diseases incident to human existence can be traced to the "school-life" of the sufferer.

The responsibility of the present to the coming generation regarding school-life is therefore enormous and involves all such questions as the proper location of school buildings with regard to pure air and good drainage, the construction of the building itself, with regard to window space and direction of light; the tendency to overcrowding, the use of proper drinking water, the providing of clean wash-bowls, towels and soap, the construction of desks in sizes corresponding to the children in the one room, so that the pupil may firmly plant his feet on the floor and always occupy the same relative position to his desk, as he grows.

School desks should be of a proper slant and height so as to compel an upright position of the body in reading and writing, thus lessening the tendency to contracted chests and distorted spines, which are the prime factors in the production of consumption and spinal disease.

Another of the most important duties of these educators is to insure that contagious diseases are excluded from the schools. This charge is given to the Medical School Inspector, who should devise proper quarantine regulations and proper "ways and means" intended to exercise a beneficial care over the hearing, sight and general good health of the rising generation. These points and

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\*Read before the Ninth General conference of Health Officers of Michigan Grand Rapids, June 1, 1906



many others will appeal to you, brother physicians, having under your control the health and morals of these embryo men and women.

However in the daily routine of medical inspection of our public schools, failure to view things from the *school position* and to subordinate medical precautions to their relative position would readily result in want of confidence by the public at large and even foster hostility toward this work. Therefore, I regard the teachers as my colleagues who can lend valuable services, and I endeavor at all times, to act reasonably, keeping in mind the fact that the school is chiefly for educational purposes, and that any extraordinary details as to prophylaxis which might be deemed advisable in dealing with a case in private practice, are quite out of reason in the schools.

The medical inspection of schools as carried on in Ann Arbor has met with general approval, and one of the most marked results, noticed by both the teachers and myself, is the fact that parents have been taught to be more careful of their children, and pay more particular attention to their general health. Also more attention is paid to the personal appearance and cleanliness of the children as well as to their physical condition.

The primary object of medical inspection of school children is to *prevent* and stamp out communicable diseases. This is done by excluding from school any child suffering with such a disease and subsequently carefully watching the other children, who may have been exposed, also preventing the attendance at

school of a child coming from a home or family where others with whom it comes in immediate contact are suffering from contagious diseases. Then, too, there are children who must be sought out who are suffering from diseases that are not necessarily contagious or who are suffering from physical defects that can be remedied, for all these things interfere with a child's progress in school. Under this head comes the defects of the eyes, ears, nose, throat, etc.

Another field of work for the medical inspector of schools is in dealing with that class of children found in every public school which are "exceptional" which is the term suggested by Mr. E. L. Stevens, associate superintendent of the New York city schools, in place of "defective" which he considers objectionable for many reasons. Dull and defective children have always been found among the intelligent in public schools. Public attention was aroused to the needs of this class in Germany several years ago, and a very large number of children in that country are now cared for in "special schools." In England such are designated as "special schools for feeble-minded and backward children," and they are assuming an important position.

The ratio of these children to the total school population in any community may vary, but statistics collected in different countries lead to the conclusion that probably one per cent are so dull or defective that they cannot be taught in the ordinary school classes.

Special thought must be given also to the relations of the child's physical growth and development to its capacity

for mental labor.

I am persuaded that a series of tests should be made in all our public school buildings to determine the quality and quantity of the ventilation. The quantity of carbon dioxide in the outside air is always greater in cities than in the country. Authorities differ as to the exact quantity of carbon dioxide admissible in school rooms where a large number of pupils are confined, but most of the best sanitarians state that it must not exceed seven (7) parts in 10,000. Dr. Guy L. Kiefer, of Detroit, found by tests that invariably in Detroit schools where the amount of carbon dioxide was high, i. e., above nine (9) parts in 10,000, the number of cases of communicable diseases was correspondingly large. This is a fact that should not be lightly passed over.

As to the heating of our school rooms, I would state that in my opinion the trouble is to keep them from becoming too warm. The best work is done in a school room with the thermometer at 68° or possibly 70°.

Upon making my daily rounds of the schools I am constantly watching the pupils for any signs or symptoms of the more common contagious diseases. For it is well understood that one child *may* infect a large percentage of the children in attendance at school, often causing a loss of days and even weeks of the school year to the delicate child who may suffer from complications of these contagious diseases. "The child is father to the man, and as the child is so will be the man." If we have a *perfect* child we may look for a *perfect* man.

One of the most frequent sequelae or complications of the common contagious

diseases are "ear troubles," and in dealing with these troubles the hardest tradition of the laity to overcome is the assertion that "the child will outgrow its ear ailment." This is a fallacy, they *will not* "cure themselves."

More than 75% of ear diseases have their beginning in early childhood, and if untreated or improperly managed, 90% of this number will go on indefinitely and become incurable—chronic.

The specialist will agree that there are but very few of the diseases of the organ of hearing that were not at some time during their history entirely curable, *and that time was in early childhood*, the time when the ailment was first noticed, when the *cause* of the trouble was as yet partially, if not entirely, dependent upon the condition of the throat and nose and was, therefore, entirely removable. Yet another mistaken idea entertained by many is the belief that a *discharging* ear is harmless, trivial, or even beneficial in some cases. Such statements are based upon their entire lack of knowledge as to the *cause* of the discharge and the possible serious results of its long continuance. Pus, wherever formed and discharged, is always the result of necrosis of some tissue. If this should occur on the surface of the body, the necrosis may cause no further trouble than an unsightly scar, but in the small cavity of the middle ear, the deposit or scar tissue formed will derange every normal function of this portion of the hearing apparatus. And this is what inevitably happens sooner or later in many cases of chronic discharging ears of children. *Another graver danger of chronic suppuration in the ear is to the life of the individual.*

We must remember the intimate relation of the cavity of the middle ear to the brain, sigmoid sinus, and carotid artery; the process of necrosis in the middle ear cannot go on indefinitely without invading some of these important structures. It is a well-known fact that insurance companies realizing the possibility of these grave results, following a suppurating ear will reject an applicant known "to have a chronic suppurating ear with extensive necrosis of adjacent parts." The medical inspector of schools must therefore be always on the lookout for ear troubles and when he finds them, use every means in his power to have the parents give the child proper attention.

Without sound dental organs there can not be perfect digestion, nor perfect health. Early attention to the teeth is one of the most powerful factors in the make-up of a sound body. Therefore, this is another field for the inspector's supervision.

The diseases for which I have excluded children from the Ann Arbor public schools are scarlet fever, tonsillitis, measles, diphtheria, röteln, mumps, smallpox, chickenpox, whooping-cough, pediculosis, ringworm, impetigo, scabies, contagious eye diseases, and offensive ear or skin troubles, tuberculosis, and syphilis. There are probably no other diseases in which an error of diagnosis is more fatal alike to the physician, the patient and in fact a whole community, than the acute infectious diseases. The medical inspector must, therefore, be constantly on guard against any or all of these dread maladies. The more common one of late that we have had to contend with is

scarlet fever. One authority has recently said that according to his observations the desquamation period of this disease is not, as is generally believed, the most contagious period, as many children have not contracted the disease when exposed to desquamating scarlet fever patients. He believes the contagium to be more readily transmitted through *various discharges*, such as of the nose, ear and throat, than through the instrumentality of the desquamated epithelium. This theory being correct, you can appreciate the necessity of discovering the disease in its incipency and remove the child suffering with scarlet fever from the school room immediately, upon discovering the case.

Whenever a child is excluded on account of a disease required by the State Board of Health to be quarantined, notice is immediately given the Health Officer and the school, or at least the room from which the child was taken, is promptly and thoroughly disinfected.

A discussion of far-reaching interest has taken place in the French Academy of Medicine on the subject of class books as disseminators of contagion in schools, especially in the cases of such diseases as scarlet fever, measles and diphtheria. Paper has long been recognized as a dangerous agent of infection, even in tuberculosis, owing to the habit among children of turning over leaves with fingers wetted with saliva. Dr. Lop, in order to test the danger in school books, made long experiments to establish the duration of infective power in various bacilli, finding it to range from 48 hours for some to 60 days for the Eberth, and 103 days for the Koch bacillus. General agreement was expressed as to the



importance of thorough disinfection of school materials.

I regard the examination of the eyes of school children as of equal importance with the exclusion of contagious diseases. For it is the duty of the medical school inspector to counteract the *underlying factors of disease*. This, in my opinion, is more important than to combat disease when actually developed.

The eyes, when defective in refraction or when imperfectly adjusted, constitute an important and commonly neglected factor both in causing and perpetuating disease. Eye strain constitutes an important element in the causation of many nervous disturbances of the so-called "functional" type found in school children. The duration of life is materially shortened by nervous debility, and the diseases which it entails. Eye strain, as a factor in their causation ought, therefore, never to be overlooked. More harm will be done school children by overtaxing their eyes than by overtaxing their brains.

The fallacious arguments that school children should not wear glasses are responsible for many who are to-day struggling along with an optical defect uncorrected. In many instances parents are injuring the health of the child by administering drugs for some "obscure ailment," or other children are blamed for being stupid and dull for a cause that can be remedied by proper attention to their defective eyes. Many "school headaches" and various "nervous symptoms" I have found were due solely to defective vision, of which perhaps the children themselves were unconscious.

The "Snellen's Test Chart for Schools" I have found admirably adapted for con-

venience and reliability. Since I have adopted this method I have found that nearly 25% of all the children have some visual defect. I would like to give more time to the development of this most important subject, but as the journalists say, "space forbids."

The most common form of eye disease among school children is catarrhal conjunctivitis, the characteristics of which are smarting, burning, watering of the eyes and sometimes sensitiveness to light. This condition is contagious and is undoubtedly of microbic origin, but if seen early can be quickly cured.

Another severe variety of acute catarrhal conjunctivitis, which is known as "pink-eye," is caused in every case by the Koch-Weeks bacillus and is violently contagious.

Trachoma or "granulated lids" is another form of conjunctivitis and is found in the eyes of many school children, usually in a mild form however, giving rise to no very striking symptoms. Often the child does not complain of its eyes at all and the disease is discovered only when the inspector inverts the eye-lids and finds them covered with small elevations. This trouble as well as the other and more severe forms of trachoma is contagious. However, these cases invariably do well under treatment, and if they are placed under the care of a physician, the children are allowed to re-enter school, the treatment being sufficient to prevent the infection of other pupils.

I think that a recent rule in Ann Arbor that children must be clean when they attend school has done much to lessen the contagious skin diseases which I found quite prevalent when I began

this work several years ago. Experience proves that dirty habits and uncleanliness of person frequently convert comparatively mild forms of germ diseases into virulent ones.

The more common skin diseases found among school children are impetigo contagiosa, scabies, pediculosis, and ring-worm. These are all caused by parasites, either animal or vegetable, which grow in or upon the skin and are transmitted either directly or indirectly from one child to another.

Impetigo contagiosa is a very common disease found in the public schools, often epidemic, as it is highly contagious among children. It is an acute inflammatory disease, due to a pus germ. It is more commonly found to originate in cases of poorly fed, ill-nourished children. However, it is a self-limited disease, and will respond readily to proper treatment. Absolute cleanliness is the most important factor in the management and treatment of this and all other skin diseases.

Scabies is caused by a living animal parasite and is a very common, highly contagious trouble. This is not only peculiar to children, but will attack adults, both sexes, and with no regard to race or color. The most important symptom is the intolerable itching induced by the parasite as it makes its tours of exploration beneath the victim's skin. This disease is purely local, and local treatment is all that is here required. The patient must be careful while under treatment not to become re-infected from clothing worn while suffering with the disease.

Pediculosis is discovered by noting the presence of the ova or nits on the hair

shaft. Here, too, proper medication which will destroy the parasite and rid the child of this loathsome trouble.

Ringworm among school children is exhibited in *two* varieties. One form (tinea tonsurans) found only on the scalp, is usually not so amenable to treatment as the fungi are deep down in the hair shaft and medication does not readily reach them. This fungus attacks the scalps of children because of the slight resistance of their skin. And, because of the easy transmission of this disease from one child to another in their close association at school, it would be very deleterious to allow a child seen to be suffering from this trouble to attend classes until entirely cured of the ailment. Disseminated ring-worm of the scalp may last for months or even years. (Cases have been reported lasting nine years). Therefore, this affection should demand the most prompt and thorough treatment.

The second variety of ring-worm (tinea circinata), whose habitat is on the non-hairy portions of the body (the face, neck and wrists being the favorite seat of the trouble in children), is readily cured by the application of local parasiticides. However, ring-worm of the scalp or body should not be considered lightly by the medical inspector, or the parents of school children, for without proper precautions many infections are sure to occur. One child suffering with any one of these troubles may infect a large percentage of its schoolmates.

Children while suffering with tonsillitis, or "sore throat," should not be permitted to attend school, as we can never predict the outcome of a seemingly "mild sore throat." Nor can we tell

what dangerous germs are lurking there which later may produce a more serious trouble (such as diphtheria) in this child, or some susceptible school-mate.

The attention of parents should be called to the fact when a child is suffering from an "irritating cough," for this if allowed to go on indefinitely may bring dire results.

In making a throat examination a thin, smooth piece of wood about six inches long is used as a tongue depressor. These are used but once, then immediately destroyed.

*Children who are found to be tuberculous, or suffering with consumption should be taken from the public schools.*

In concluding this paper, I would state, that in briefly mentioning these various diseases I have by no means compiled a complete list of the disorders and ailments, (contagious or otherwise); that the medical inspector of schools will find among school children in making his daily rounds. It simply shows the necessity of careful, painstaking, watchfulness that must be exercised by the inspector if he intends to do conscientious work.

When a child is found to be suffering from any ailment for which it should receive attention, a blank form, detached from a stub which is kept for future reference, is filled out and handed to the child with instructions to take this notice home to the parents. This notice is not mandatory in its nature but is

meant as a kindly suggestion to the parent. However, if no attention is paid to the first notice, subsequent notices should follow from time to time until the parent is duly impressed with the necessity of attending to the matter by placing the child under the care of the family physician, or any specialist *they may choose* for treatment with regard to the specified ailment.

As a rule parents comply with these suggestions with little or no delay, especially when the notice is the first intimation they have received that *their* child is suffering from some ailment that they had not before observed or of which they may have been entirely ignorant.

The number of children sent home suffering with contagious diseases, many of them just developing, prove that this rigid, daily inspection of the children prevents the development of innumerable cases, and thus not only saves the parents, but the city and county untold expense. In some cities the inspectors are required merely to take the daily reports of the various teachers. I am satisfied from my own experience, that *this is not enough*. A school teacher, however excellent, is no more able to detect disease in the school-room than in the home, and *detection* is all important.

Some patience and tact are required to inaugurate the work of systematic medical inspection of schools in any locality, but the community rapidly adopts it and gives it intelligent support.

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Great pain following any operation upon the biliary tract should always lead one to suspect leakage of bile into Morrison's space. If such should be found to be the case insert a drainage tube.

In all cases of acute abdominal pain, never fail to examine the lungs and gums. The onset of pneumonia or pleurisy frequently closely simulates acute appendicitis.



## The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to Editor B. R. Schenck, 502 Washington Arcade, Detroit, Mich.

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AUGUST, 1906

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### Editorial

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**A Series of Meetings in the Interest of the Profession**, to be addressed by Dr. J. N. McCormack, the representative of the American Medical Association, will be held in October. An itinerary is now being arranged, covering twenty-five cities. The trip will begin on Monday, October eighth, and will continue about thirty days.

Doctor McCormack has addressed audiences all over the United States upon popular topics, such as "Things about Doctors which the People Ought to know" and "The Danger to the Public from an Unorganized and Underpaid Medical Profession." In every state visited, it has been the complaint that the doctors and the people did not know beforehand how interesting and helpful the addresses were to be. Let us not make this mistake in Michigan.

Physicians are frequently accused, often perhaps truthfully, of being self satisfied, intolerant of criticism and uninterested in public affairs. We are engrossed, many of us, in the purely scientific side of our profession and give little attention to our relations to one another and to the world at large. Dr. McCormack has traveled about for several years studying these things and conditions,

and he may be said to have created "the new specialty of Clinical Medical Sociology."

Commenting on Dr. McCormack's work, the Illinois Medical Journal says:

No man can do the best work of which he is capable so long as he is struggling with practical and financial difficulties. In proportion to the expense of preparation as well as the enormous amount of non-remunerative philanthropic work done by the medical profession, the financial returns to the average physician are far below what they should be. If the doctor were better paid, he could live better, have more leisure for study and research, and so be a better physician and a better citizen, of more value to himself, his family, his individual patients, and the state as well. This does not mean, necessarily, a raising of fees, in the individual case. It means a regulation and readjustment of economic professional conditions.

As scientific men, we must obtain facts before we construct theories. To avoid hasty generalization, our facts must be drawn from all grades of the profession, in all parts of the country. Before our local societies can legislate intelligently and effectively on lodge practice, contract practice, fee tables, insurance and corporation work, and all other questions involved in practical medical ethics, they must know whether the conditions that confront their members are local or general, what the causes of these conditions are, and how other societies have handled them. Only a man of professional training, broad sympathies, keen observation, judicial temperament and frank fearlessness, can supply the needed personal knowledge of

local conditions throughout the country. If nothing else was accomplished thereby, the medical profession could well afford to send a man like Dr. McCormack over the country, in order to learn exactly the conditions that prevail in professional circles.

Having obtained this knowledge, he is now in a position to advise regarding existing local evils. Every member of every county society can learn what difficulties and problems have been encountered by his professional brethren elsewhere and how they were solved. The public can learn of the relation which should exist between physician and patient. The bench, the bar, the clergy, the school board and its teachers, can learn how they can best aid in raising the standard of health and happiness in their town or county. It is the unanimous opinion of the organized profession that, following Dr. McCormack's meetings, a better feeling prevailed both among doctors and on the part of the laity toward doctors, that his talks have everywhere resulted in increased enthusiasm, stimulation of effort, and clearer ideas and plans of work.

Do not forget that these meetings are for the laity as well as for the profession. It is planned to have a prominent layman act as chairman at each meeting.

Completed plans with dates and places of meetings will be given in the September issue.



**The Work on Tuberculosis**, which the State Society has this year taken up was mentioned last month. With the possible exception of the work on venereal prophylaxis, the campaign against consumption, which is being planned, is the most

important activity yet undertaken by the Society.

We have a splendid organization of two thousand physicians, with branches in all communities, and an established system capable of carrying on a campaign along any line to which we may turn our attention. We exist, not solely for the purpose of holding an annual meeting where papers may be read and discussed. If organization means anything, it means much more than that. It means the banding together of the best physicians of the state into an organization, alive, alert to the needs of our fellow citizens. Recognizing these needs, we should be ever willing to think, to plan, to work toward the betterment of those over whose health we watch. Every opportunity for such betterment should be embraced.

The spreading of knowledge concerning the infectiousness of tuberculosis is an opportunity open to every one of us, and every county society under the leadership of the Committee should take the subject up.

The problem of the stamping out of consumption in Michigan is, however, too broad a one for the medical profession to fight alone. We must have the help of men of all professions, of men and women in all walks of life. But before they can be of help, they must be educated and here is the opportunity for us all. The fight must be begun and directed by us.

It seems curious that a few cases of mild smallpox in one of our cities will well nigh create a panic, yet little attention is paid to tuberculosis, a disease much more deadly, for it kills some 5,000,000 of people every year. Our

Health Boards are accomplishing much, yet they experience great antagonism, not only from the uneducated but from the educated as well. These conditions come about, of course, solely from the ignorance which we are now called upon to dispel.

Ways and means for carrying out a campaign of education will be worked out by the committee. While not yet completely organized, the members have already been active in getting the Tuberculosis Exhibit, recently at Grand Rapids, for Manistee. The City Council of Detroit is awake to the situation and has appropriated \$500.00 to bring the exhibit to Detroit. It is to be hoped that it may be seen in every city in the state. It can be, if the members of our society will do their duty and get out and work for it.



**Packingtown Reassurances.**—So malodorous was the Neill-Reynolds report to President Roosevelt, and so obvious the public indignation finally focussed through this agency, that even the obtuse olfactory sensibilities of the Chicago packers were affected. It was accordingly deemed expedient to eradicate as far as possible the taint clinging to their establishments and their methods. For this purpose the packers, through their allies in the Illinois Manufacturers' Association and Chicago Commercial Association, set about to "reassure the public" as to Packingtown conditions, and employed a group of "experts" who were commissioned to make a thorough inquiry and to report to their business associates and through them to the public. It is not altogether pleasant to re-

cord, in view of the report of this expert commission as set forth in the public press of the United States, that several men of prominence in medical science are named in connection with it, either as principals or accessories. For as is plain to every citizen of average intelligence, and as must be painfully evident to every medical colleague, these experts have furnished a report for the packers which seeks by scientific verbiage to obscure the essential fact that Packingtown is as dirty, as dangerous to public health, and as much of a disgrace to Americans as the Lancet Commission found it, as Upton Sinclair painted it, and as Neill-Reynolds reported it; save possibly that for the expected visit of its own commission it had hurriedly "cleaned house," and trained its operatives to put on "company manners." Even so, and with its best attempt to clothe in verbosity the "clean bill of health for the stockyards," careful reading of the expert's statements will disclose an acknowledgment of existing evils vitally portentous in their danger to public welfare.

Greatly is it to be regretted that this report of physicians who assumably are guardians of the public health did not deal frankly with the existing evils, since it must take rank as the findings of the first group of representatives of the American medical profession to pass upon the Chicago packing houses. Its splendid opportunity of performing a real public service by faithfully portraying the scandalous shortcomings of these establishments and of recommending the only effective remedy—a rebuilding along lines of modern sanitary efficiency of a large portion of Packingtown, and the



institution of methods of common and scientific cleanliness in handling the products—was lost. For the benefit, however, of such a conscientious reformer as President Roosevelt, and to correct a misapprehension in the public mind, it should be made clear that the medical profession of the United States, as a body, does not ratify the report of the packers' experts.



### **"Beware the Nefarious Doctors' Trust"**

is the title of a recent circular sent out by the Proprietary Association. Commenting on this, *Collier's Weekly* says editorially—"The only medical combinations with which we are conversant are devoted mainly to the protection of the public. Most states, and many cities, have volunteer organizations of physicians banded together for the unselfish preservation of the public health. We cannot recall any conspicuous services of patent medicine venders in this line of endeavor. They are committed, rather, to the opposite purpose, that of undermining health by frightening people into illness. When our physicians begin to frighten patients into illness by false diagnoses, when they guarantee cures and then go back on the guarantee, when they undertake to banish incurable disease with secret and mysterious remedies, when they fasten drug habits upon the innocent for their own profit, then it will be time enough for the nostrum trade to rebuke the sin of the doctors."

That honesty is the best policy is, by the way, again demonstrated by *Collier's*. Realizing the duty of a great magazine,

the editor took up the patent medicine evil and out of principle refused advertisements, which the previous year netted \$77,088. But this sacrifice to logic and principle was unexpectedly offset by new business which more than equalled that which had been lost. It is to the credit of the business public that they have thus recognized that it is better to be represented among clean advertisements, rather than surrounded by announcements of cure alls, cocaine nostrums, "medicinal" whiskies, et al.

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## **Book Notices**

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**Operative Otolaryngology, Surgical Pathology, and Treatment of Diseases of the Ear.**—By Clarence John Blake, M. D., Professor of Otolaryngology in Harvard University, and Henry Ottridge Reik, M. D., Associate in Ophthalmology and Otolaryngology Johns Hopkins University, New York and London. D. Appleton & Co., 1906. Price, cloth, \$3.50 net.

The authors state that the book (359 pages) has been written in answer to questions asked in the class room, by the bedside, and in consultation, that the detail of surgical procedure has been confined to that acceptably applicable to the conditions presented, and that it was the authors' effort to present the given subject as simply as possible. The authors have admirably carried out their intentions. The chapters on Anatomy, Aseptic Technique, the paragraph on Thrombosis of the Lateral Sinus, the chapter on Adventitious Aural Surgery and also the appendix are of especial interest.

The appendix contains short stories or abstracts of articles about the Value of Paracentesis of the Membrana Tympani (by Buerkner), Statistics of House Patients Treated on the Aural Service of the Massachusetts Charitable Eye and Ear Infirmary, a description of the Algesimeter and its promise as a useful adjunct in diagnosis, the localizing symptoms of Brain Abscess (Waterman, Boston), the removal of the stapes for the relief of Auditory Vertigo and when to apply it (Crockett, Boston); hearing tests as an aid in locating tympanic lesions, surgical exploration of the Labyrinth (Julien Bourget).

The type and the illustrations are unusually clear. The latter are well chosen. The book is more than a supplement to our literary otologic armamentarium. The facts referred to must become familiar not only to the otologist but to the general practitioner as well.

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**Consumption: Its Relation to Man and His Civilization; Its Prevention and Cure.**—By John B. Huber, A. M., M. D., Visiting Physician to St. Joseph's Hospital for Consumptives, etc. 9½ x 6½ inches; 535 pages, 131 illustrations. Cloth, \$3.00. Philadelphia, J. B. Lippincott Co., 1906.

In this well made book, Dr. Huber has gathered together an immense number of most interesting and instructive facts concerning pulmonary tuberculosis. It is not a medical treatise, but rather a store house of information on the historical, medical, economic and sociologic aspects of the disease. It is written for the layman as much as for the physician and deserves a wide reading.

The scope of the work may be judged from a list of a few of the chapters—such as Sociological Considerations, The Cure, Sanatoria, Administrative Measures, etc. More technical matters are treated of in the Appendix, where there are many useful facts about disinfection, hydrotherapy, tents, sanatorium construction, etc.

The author has much literary ability and his very pleasing style makes fascinating and easy reading. We would highly recommend this volume to every physician who wishes to inform himself on the many and varied phases of this live topic.

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**The Practice of Gynecology.**—In original contributions by American Authors. Edited by J. Wesley Bovee, M. D., Professor of Gynecology George Washington University, Washington, D. C. 836 pages. Illustrated with 382 engravings and 60 full-page plates. Cloth, \$6.00. Lea Brothers & Co., Philadelphia and New York, 1906.

Bovee's Practice of Gynecology forms a volume of the "Practitioners' Library," and is a treatise on the diseases of the generative organs of women and on those of neighboring organs, the urinary system and rectum. The book has the preference over others on the same subject, in that it is written by seven members of the medical profession under the editorship of Bovee. In this way the single chapters are written in the most accurate way, under consideration of the latest and most modern knowledge. Excellent illustrations are found throughout the book, partly original and partly taken from other well known works.

Of the separate chapters, "Examination of Pel-

vic Contents," "Technique of Abdominal Operations," and the one on "Extrauterine Pregnancy," are written by X. O. Weider, Pittsburg.

The editor, Bovee, has written the chapters on "Developmental Anomalies of the Female Generative Organs," "Sterility," "Diseases of the Rectum and Anus," "Surgical Conditions of the Kidney," "Ureter," "Affections of the Bladder and Urethra."

J. Riddle Goffe, of New York, wrote the chapters on "Menstruation," "Displacements of the Uterus," "The Vaginal Method of Operating," "Abdominal Operations: Their After-treatment and Complications." The chapters on "Fecal Fistulae," "Urinary Fistulae," "Lacerations of the Penineum," "Diseases and Injuries of the Vulva and Vagina," were written by George H. Noble, of Atlanta, Ga.

"The Diseases of the Uterus," by G. Brown Miller, Washington, D. C. (in seven different chapters), "The Infectious Diseases of the Tubes and Ovaries," are treated by Thomas J. Watkins, of Chicago, while the other diseases of both organs are from the pen of Benjamin R. Schenck, of Detroit.

The book can be most highly recommended as each contributor has complied with the idea of the editor "in giving the results of scientific investigation in an impartial and interesting manner."

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**Eczema: A Consideration of Its Course, Diagnosis and Treatment.**—By Samuel Horton Brown, Assistant Dermatologist Philadelphia Hospital, etc. Cloth, 5x8 in., 104 pages. Price, \$1.00. Philadelphia, P. Blakiston's Son & Co., 1906.

This little book covers an important subject in a comprehensive way and contains many practical points which the practitioner will find very useful. A particularly good chapter is that on the "Treatment in Various Regions." In all 146 prescriptions, with points in their application, are given.

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**A Compend of Pharmacy.**—By F. E. Stewart. Sixth edition; 5x7 in.; 187 pages; cloth, price \$1.00. Philadelphia, P. Blakiston's Son & Co., 1906.

Blakiston's Quiz Compend, bound in brown cloth, are familiar to all. The present volume is the sixth edition of that on pharmacy which has been in use since 1886. It has been revised and now conforms to the last edition of the U. S. Pharmacopœia.

PROCEEDINGS OF THE FORTY-FIRST ANNUAL MEETING OF THE MICHIGAN  
STATE MEDICAL SOCIETY, HELD AT JACKSON, MAY 23, 24 AND 25, 1906.

MINUTES OF THE MEETINGS OF THE COUNCIL HELD  
DURING THE ANNUAL MEETING.

The Council of the Michigan State Medical Society was called to order in the parlors of Elks' Temple, Jackson, on the evening of May 22, 1906, by Chairman Burr.

Present: Drs. Herdman, Bulson, Haughey, Burr, Willson, Dodge, Felch, President Inglis and Secretary Schenck of the State Society.

The minutes of the January meeting were read and approved.

Chair asked for the report of the Secretary in regard to the Order of Business which he had been instructed to prepare and submit to the Council.

Secretary submitted the following:

ORDER OF BUSINESS FOR THE COUNCIL.

For January Meetings:

Call to order.

1. Reading of minutes of the last meeting.
2. Report of Secretary of the Council.
3. Communications from Chairman and President.
4. Report of General Secretary-Editor.
5. Report of Treasurer.
6. Reports of Councilors in numerical order.
7. Reports of Committees—  
Financial.  
Publication.  
County Societies.
8. Miscellaneous Business: Hearing of appeals from Councilor's decision in questions of membership, discipline, etc.
9. Election of General Secretary-Editor.
10. Election of Treasurer.
11. Adjournment.

For Annual Meeting, First Session:

Call to order.

1. Reading of minutes of January or last meeting.
2. Secretary's report.

3. Reading and adoption of Council's report to the House of Delegates.
4. Hearing of appeals from Councilor's decision in questions of membership, discipline, etc.
5. Recess.

Second Session:

Call to order.

1. Reading of minutes of last session.
2. Communications from General Body, House of Delegates, Members, Committees, etc.
3. Hearing of appeals from Councilor's decision in questions of membership, discipline, etc.
4. General business.
5. Recess.

Third Session:

Call to order.

1. Reading of minutes of previous session.
2. Introduction of new members and President.
3. Reception of and action upon communications from the General Body, House of Delegates, Individual Members, Committees, etc.
4. Hearing of appeals from Councilor's decision in questions of membership, discipline, etc.
5. Appointment of Standing Committees—  
Financial.  
Publication.  
County Societies.
6. Election of Officers (Chairman, Secretary)
7. Fixing amount of Secretary's compensation.
8. Adjournment.

Dr. Felch moved that the report be accepted and adopted. Supported by Dr. Herdman and carried.

Secretary had no further report to make.

The report of the Council, through its Chairman, to the House of Delegates, in which was in-



corporated a recommendation that the Council appropriate one hundred dollars to procure a suitable testimonial for Dr. A. P. Biddle upon his retirement from the Secretaryship, was read, discussed and adopted section by section.

#### NAMES PROPOSED FOR RESIDENT HONORARY MEMBERS.

By Dr. Haughey: Dr. Wm. Parmenter of Vermontville. Supported and carried.

By Dr. Herdman: Dr. Thomas Flintermann, of Detroit. Supported and carried.

Chair declared nominations closed.

#### NAMES PROPOSED FOR NON-RESIDENT HONORARY MEMBERS.

By Dr. Willson: Dr. J. N. McCormack, of Bowling Green, Ky. Supported and carried.

Chair declared nominations closed.

The following resolution was adopted by the Council:

"The Council recommends that the House of Delegates take action, by resolution or otherwise, in the interest of Insurance Policy Holders, approving of the position of those medical men who have stood out against the false economy of Life Insurance Companies that, in a spasm of virtue, have reduced fees for medical examinations. In conscientious and careful action on the part of examining physicians lies the only security to companies and their policy holders, and the best attainable medical examination is none too good. It would seem fitting that a ringing resolution resisting the lowering of fees and demanding additional compensation for insurance examinations be adopted by this society."

The Council authorized the Chairman to incorporate the following in his report to the House of Delegates:

"The Council recommends the appointment of a committee to revise the Constitution and By-Laws."

Dr. Schenck read a letter received from Dr. McCormack, in which he stated that he could spend three or four weeks in Michigan beginning October 8, 1906, if his itinerary could be arranged. He would like to devote a day to each place, having an afternoon and an evening meeting.

Chairman Burr called the Council's attention to an invitation to attend the meeting of the Association of State Medical Journals to be held in Boston, June 4, at 6 p. m.

Council adjourned to meet at two o'clock, May 23, at the same place.

The Second Session of the Council of the Michigan State Medical Society was called to order at Elks' Temple, May 23, 1906, by Chairman Burr.

Present: Drs. Herdman, Bulson, Haughey, Rockwell, Spencer, Burr, Willson, Small, McMullen, Dodge, Felch, President Inglis and Secretary Schenck of the State Society.

The minutes of the previous meeting were read, corrected and approved.

The report of the committee appointed to draft resolutions to Dr. Biddle on his retirement from the Secretaryship was read by Dr. Haughey, who also read a letter from Dr. Biddle acknowledging the receipt of the resolutions and desiring that his appreciation be expressed to the Council.

By Dr. Willson: That the resolutions, together with the letter received from Dr. Biddle, be spread upon the minutes of this meeting. Supported by Dr. Rockwell and carried.

Dr. Rockwell presented the name of Dr. M. L. Towsley of Kalamazoo for Honorary Membership.

Laid on the table until the session of May 23rd.

The third session of the Council was called to order at 2:00 p. m., May 24, 1906, by Chairman Burr.

Present: Drs. Herdman, Bulson, Haughey, Rockwell, Spencer, Burr, Small, McMullen, Baker, Dodge, Felch, also President Inglis and Secretary Schenck of the State Society.

The minutes of the last meeting were read and approved.

Dr. W. J. Herdman, Chairman of a Special Committee, appointed in January, made the following report:

Your Committee appointed at the January, 1906, meeting of the Council to formulate a statement defining the position which we, as a medical organization, maintain with reference to all so-called pathies or sectarian forms of practice of medicine or surgery would respectfully submit the following report:

The American Medical Association as now organized, with its component state and county

medical societies, stands on a platform of broad and comprehensive knowledge, which aims to include all that has been discovered in medical science and art that has stood the test of experience, no matter from what source it originated.

In its future progress and search after larger measures of truth our aim is to be guided by this same tolerant and liberal spirit. We do not, therefore, recognize any pathies or exclusive and sectarian modes of practice, believing such, as far as they contain truth, to come within the boundaries of that greater domain of truth which our organization has entered; the truth which they possess being but a part of that greater volume of which medical science is composed.

We welcome to membership in our organization all who, having the requisite preliminary qualifications for the practice of the medical profession, are willing to adopt this comprehensive conception of medical science and art and seek to promote it in their study and practice.

Having thus defined our attitude toward all exclusive or sectarian forms of practice it can be readily seen that we cannot as an organization affiliate with or enter into fraternal relations with any body of physicians who have voluntarily placed limitations to their attainments and who by so doing fail to recognize much of that which medical science and art have revealed.

W. J. HERDMAN,  
W. T. DODGE,  
A. E. BULSON.

By Dr. Rockwell: That the report of the committee be accepted and adopted. Supported and carried.

Chair called attention to the communication from the General Session requesting the Council to appropriate five hundred dollars for the relief of California physicians.

By Dr. Haughey: That this Council appropriate five hundred dollars for the California physicians' relief fund.

Supported by Dr. McMullen and carried.

By Dr. Herdman: That the money be remitted through the machinery of the A. M. A. for the benefit of the physicians, sufferers from earthquake and fire, of California.

Supported by Dr. Haughey and carried.

In connection with Dr. McCormack's proposed visit to Michigan, Dr. Schenck read several circular letters which had been used in Kentucky and asked for suggestions as to the cities to be visited.

By Dr. Dodge: That Dr. J. B. Murphy be made a non-resident honorary member. Supported by Dr. Herdman and carried.

By Dr. Dodge: That the Secretary be instructed to cast the ballot of the Council for Dr. Burr for Chairman for the ensuing year. Supported and carried.

Secretary cast the unanimous ballot, 11 votes.

Dr. Burr declared elected.

By Dr. Herdman: That the Chair cast the ballot of the Council for Dr. Haughey for Secretary for the ensuing year. Supported and carried. Chair cast the unanimous ballot, 11 votes.

Dr. Haughey declared elected.

Chair requested Secretary to read that portion of the minutes of January meeting referring to compensation for Secretary and assistant, which is as follows:

By Dr. Willson: That the sum of \$50.00 be voted to the Secretary of the Council, this sum to pay the expenses of postage, stationery, etc., of his office as Secretary. Also that an honorarium of \$50.00 be voted to Miss Anna Haughey in recognition of her services as stenographer to the Council for the year June, 1905, to May, 1906.

By Dr. Dodge: That the same action be taken for the ensuing year. Supported and carried.

Council adjourned to meet in January at call of Secretary.

(Signed) W. H. HAUGHEY,  
Secretary of Council.

#### MINUTES OF THE PROCEEDINGS OF THE HOUSE OF DELEGATES.

President—David Inglis, Detroit.

Secretary—B. R. Schenck, Detroit.

FIRST DAY, MAY 23, 1906, 8:30 A. M.

1. Call to order by President Inglis.
  2. Majority of the members of the House being present, meeting declared open for the transaction of business.
  3. Minutes of last annual meeting read and approved.
  4. Report of the Council, C. B. Burr, Chairman. (See page 458.)
- By C. S. Oakman, Wayne: That the report of the Council be referred to a Business Committee, excepting that part relating to the revision of the Constitution and By-Laws, which shall be referred to a Special Committee, appoint-

ed by the Chair, who shall begin their work immediately and be ready to report at the session of May 24th, if possible, thus finishing up this work during the present meeting in Jackson. Supported and carried.

5. Report of Committee on Legislation and Public Policy, W. H. Sawyer, Hillsdale, Chairman. (See page 461.)

Report accepted and placed on file.

6. Report of the National Legislative Council, A. M. A., Flemming Carrow, Michigan member. (See page 461.)

Report accepted and placed on file.

7. Miscellaneous Business.

a. The following were proposed from the floor to serve on the Committee on Nominations, to nominate First, Second, Third and Fourth Vice Presidents; two Representatives in the House of Delegates, A. M. A., for two years; and to fix place of meeting for 1907:

L. S. Griswold, Mecosta; S. S. Lee, Houghton; W. S. Anderson, Wayne; J. H. Buckham, Genesee; A. E. Thompson, St. Clair.

By C. T. Southworth, Monroe: That the gentlemen proposed be declared elected. Supported and carried.

b. Chair appointed the following as the Business Committee, to which has been referred the recommendations contained in the various reports: W. L. Dickinson, Saginaw; C. H. Lewis, Jackson; Geo. Björkman, Delta; T. M. Yeomans, Shiawassee; W. L. Griffen, Muskegon.

c. Chair appointed the following to serve on the Special Committee to revise the Constitution and By-Laws: Theo. A. Felch; W. C. Huntington, Livingston; D. Emmet Welch, Kent; B. R. Schenck, Secretary.

d. Jackson County presented the following resolution, through its delegate, C. H. Lewis:

*Whereas*, The deplorable practice of abortion is so prevalent as to cause wrecks of very many American women, and

*Whereas*, Many mid-wives and unprincipled members of an honorable profession are induced to assist in the accomplishment of this nefarious practice, and conviction under the laws of this state is almost impossible, unless the subject dies; therefore be it

*Resolved*, That it is the sense of the Jackson County Medical Society that the statutes of the state should be made more stringent, and they recommend that this matter be referred to the Com-

mittee on Legislation and Public Policy of the Michigan State Medical Society for a furtherance of this object.

(Signed) E. C. TAYLOR,  
N. H. WILLIAMS,  
P. J. EDWARDS,  
Committee.

On motion, the resolutions were referred to the Committee on Legislation and Public Policy.

James F. Breakey, Washtenaw, stated that at a recent meeting of the Washtenaw County Medical Society a resolution was presented and adopted pledging the members of the Washtenaw County Medical Society to a minimum fee of five dollars for life insurance examinations, and requesting that the delegate to the Michigan State Medical Society bring the matter to the attention of the State Medical Society and request such co-operation as may be possible.

Referred to the Business Committee.

W. L. Griffen, Muskegon, also introduced a resolution resisting the lowering of fees for Life Insurance Examinations.

Referred to the Business Committee.

By W. H. Hutchings, Wayne: That a committee of three be appointed by the Chair to procure a suitable testimonial for A. P. Biddle as a token of the regard and esteem in which he is held by the profession. Supported and carried.

House of Delegates adjourned to meet May 24th at 9:00 a. m.

SECOND DAY, THURSDAY, MAY 24, 9 A. M.

1. Call to order by President Inglis.

2. Minutes of previous session read and approved.

3. Miscellaneous business.

a. T. A. Felch, Chairman of the Committee appointed to revise the Constitution and By-Laws, reported as follows:

Your Committee recommends that Art. VIII, Sec. 2 of the Constitution, be so changed as to read: "The Council shall be elected for terms of six years each, these terms being so divided that four Councilors shall be chosen each alternate year."

*(Proposed amendments to the Constitution must lie over for one year and be officially sent to each component County Society at least four months before the session at which final action is taken.—Art. XIII.)*



b. The Committee also recommended the adoption of certain amendments to the By-Laws, which were read and laid on the table until the session of May 25th. (See 4 of minutes of May 25th.)

c. Report of Committee to Encourage the Systematic Examination of the Eyes and Ears of School Children Throughout the State, Walter R. Parker, Detroit, Chairman. (See p. ...)

By W. S. Anderson, Wayne: That the report of the Committee be accepted and placed on file, and the Committee be continued. Supported and carried.

d. Report of the Committee on Patent Medicine Evil, C. B. Stockwell, Port Huron, Chairman. (See page 463.)

By G. B. Gesner, Calhoun: That the report be accepted and placed on file. Supported and carried.

By D. R. Clarke, Wayne: That it is the sense of this meeting of the House of Delegates that the editor of the State Medical Journal be requested to apply for permission to reprint, either in whole or in part, the series of articles appearing in the Journal of the A. M. A., entitled 'The Physician and the Pharmacopoeia.'

Supported and carried.

Chair requested Dr. Clarke to make such abstracts for the Journal.

By W. E. Coates, Manistee: That the Secretary of the State Society put himself into communication with the secretaries of the various county societies recommending that each society appoint a committee of one upon Legislation and Special Work, where one does not already exist. Supported and carried.

(See July issue of Journal, p. 397.)

e. W. L. Dickinson, Saginaw, Chairman of the Business Committee, made the following report:

Your Business Committee respectfully submits the following report on the matters referred to it.

1st. "Resolved that the Michigan State Medical Society shall express by a rising vote of thanks its appreciation of the eminent services of Dr. Leartus Connor in the reorganization and up-building of the society.

Carried unanimously.

2nd. Resolved, that the recommendation of the Council that the Society shall testify in a substantial way to its estimation of the long-continued and arduous labors of the former secretary, Dr. A. P. Biddle, and the appropriation of an amount not to exceed \$100 authorized by the Council for this purpose, be adopted.

Resolution adopted unanimously.

3rd. The nomination by the Council of Dr. William Parmenter, of Vermontville, and Dr. Johann Flintermann, of Detroit, as resident honorary members, and Dr. J. N. McCormack, of Bowling Green, Ky., as non-resident honorary member of the Society is endorsed, and their election advised.

Recommendation adopted.

5th. Your Committee highly approves of the report of the Council on the councilor district meetings held during the past year, and hopes for a continuance of such meetings with increasing success and profit for the year to come.

Recommendation adopted.

6th. Your Committee advises the adoption of the recommendation of the Council in the matter of a return to a two-day session of the Society and the changes in the Constitution and By-Laws necessary for the carrying out of this purpose; also that the first meeting of the Council be held in the afternoon and that of the House of Delegates in the evening of the day before the opening of the general sessions, and that the orations be omitted.

Recommendation adopted unanimously.

7th. A resolution in the matter of fees for life insurance examinations was reported by the committee and created some discussion.

By Dr. D. R. Clarke, Wayne: That this section of the Committee's report be referred back to the Committee with power to amend, with instructions to report at the General Session, May 25th.

Supported by G. B. Gesner, Calhoun, and carried.

W. E. Coates, Manistee, presented the following resolution:

"Whereas, the study and prevention of tuberculosis is one of the greatest problems to be faced and solved largely through the agency of the medical profession; therefore, be it

Resolved, That a permanent committee, to be known as the "Committee on the Study and Prevention of Tuberculosis," be established by the Michigan State Medical Society, said committee to consist of five members to be appointed by the President of the Society. The duties of said committee shall be to report annually, and from time to time through the columns of the State Medical Journal, on the year's progress along the lines of study, prevention, treatment, and cure of tuberculosis, together with economical

and sociological aspects of the disease; to place this information before the county medical societies; to co-operate in every way possible with National, State or Local societies and associations for the study and prevention of tuberculosis, and with all local, state and national Boards of Health, to secure the attainment of the same ends—the prevention, relief and cure of tuberculosis.”

Resolution was supported by W. C. Huntington, Livingston, and carried.

House of Delegates adjourned to meet May 25th.

### THIRD DAY, FRIDAY, MAY 25.

1. Call to order by President Inglis.
2. Minutes of previous session read and approved.

3. The Committee on Nominations, through S. S. Lee, Houghton, reported as follows:

For 1st Vice President, Dr. Wm. Fuller, Grand Rapids.

For 2nd Vice President, Dr. E. T. Abrams, Dollar Bay.

For 3rd Vice President, Dr. D. E. Robinson, Jackson.

For 4th Vice President, Dr. A. R. Stealy, Charlotte.

Delegates to House of Delegates, A. M. A., for two years: Dr. A. I. Lawbaugh, Calumet; Dr. Leartus Connor, Detroit.

Alternate (1906), Dr. O. H. Clark, Kalamazoo.

Place of meeting 1907, Saginaw.

Moved that the Secretary cast the ballot of the House in favor of the various candidates recommended for the offices named.

Supported and carried. Secretary cast the ballot and the above named gentlemen were declared elected.

By W. E. Coates, Manistee: That the next Annual Meeting of the State Medical Society be held in the city of Saginaw.

Supported by C. H. Lewis and carried.

4. Miscellaneous business.

a. Secretary read the following proposed amendments to the By-Laws, which refer to the omission of the Annual Orations:

Chap. III, Sec. 1, line 10, omit the words “and the Annual Orations.”

Chap. III, Sec. 4, second line, omit the words “and Orations.”

Chap. IV, Sec. 2, sixth and seventh lines, omit the words “and the Annual Orations.”

Chap. V, Sec. 2, omit entire section.

By W. H. Hutchings, Wayne: That the amendments be adopted.

Supported and carried.

Chap. VI, Sec. 9, line 1, substitute for “12:00 o'clock, noon,” the words “11:00 a. m.”

By C. S. Oakman, Wayne: That the amendment be adopted.

Supported and carried.

Chap. VII, Sec. 4, at the end of first paragraph, amend to read: “He shall annually make a report to the Council at the January Meeting and the essentials of this report shall be incorporated in the report of the Chairman of the Council to the House of Delegates at the next session.”

By W. H. Hutchings, Wayne: That the amendment be adopted.

Supported and carried.

Chap. IX, Sec. 1, omit the words, “Committee on Nominations.”

By C. S. Oakman, Wayne: That the amendment be adopted.

Supported and carried.

Chap. IX, Sec. 4, line 2, substitute for the word “appointed” the word “elected.”

By W. H. Morley, Washtenaw: That the amendment be adopted.

Supported and carried.

b. Secretary presented a communication from the Council that Dr. J. B. Murphy, Chicago, had been nominated non-resident honorary member.

By W. H. Hutchings, Wayne: That Dr. J. B. Murphy be elected a non-resident honorary member of this Society.

Supported and carried.

5. The report of the Committee on Vital Statistics was omitted because of the absence of its Chairman, H. B. Baker, Lansing.

6. New and unfinished business.

W. H. Morley, Washtenaw, presented the following:

“Resolved, that the State Medical Society believes that the existence of tuberculosis among dairy cattle is a serious menace to the public health, and inasmuch as the state laws of Michigan are deficient in measures intended to protect the public from this danger;

Resolved, that this Society request its Committee on Legislation and Public Policy to peti-

tion the Legislature to so modify the laws of the state as to encourage the more general application of the tuberculin test to cattle by providing for a satisfactory compensation for cattle destroyed."

Resolution adopted.

W. L. Dickinson, Saginaw, Chairman of the Business Committee, made the following report:

Your Business Committee would recommend the adoption of the following resolution:

"Whereas, The Michigan State Medical Society deplores the lack of systematic teaching of ethics in the medical colleges of the United States, and

Whereas, this often results in errors in medical conduct on the part of graduates, especially of the younger men, therefore be it

Resolved, That the Michigan State Medical Society heartily recommends to the faculties of the various medical schools the systematic teaching of ethics to their students.

By C. S. Oakman, Wayne: That the resolution be referred to the Committee on Medical Education.

Supported and carried.

C. H. Lewis, Jackson, presented the following resolution:

"Resolved, That the President be requested to appoint a committee of three, whose duty it shall be to investigate the practice of fraternal order contract practice in its effects upon the interests of other practitioners and upon the maintenance of a just rate of fees for professional services; and report their findings to the Society at its next meeting."

Dr. A. L. Seeley, Tuscola, offered the following amendment to Dr. Lewis' resolution:

"That the committee, while making its investigation regarding the fraternal contract work, also take into consideration the contract work being done in the different townships throughout the state for the Poor Board. The Poor Commissioners in a great many counties go into each township and after canvassing the physicians let the contract to the lowest bidder for the poor work, and that often times is way below cost. A schedule could very probably be adopted for that kind of work with which we could get along very harmoniously.

Amendment supported and carried.

Moved that the resolution as amended be adopted.

Supported and carried.

House of Delegates adjourned to meet in Sag-

inaw the day before the opening of the General Meeting.

(Signed) B. R. SCHENCK,  
State Secretary.

#### MINUTES OF THE PROCEEDINGS OF THE SOCIETY IN GENERAL SESSION.

President, David Inglis, Detroit.

Secretary, B. R. Schenck, Detroit.

FIRST DAY, WEDNESDAY, MAY 23, 10:30 A. M.

1. The Forty-first Annual Meeting was called to order at the Elks' Temple, Jackson, by President Inglis.

2. Prayer by the Rev. R. E. McDuff, Jackson.

3. Address of welcome, Hon. W. W. Todd, Mayor of Jackson.

4. Address of welcome in behalf of the profession, A. E. Bulson.

5. Report from the House of Delegates, B. R. Schenck, Secretary.

6. Address of the President, David Inglis, Detroit. Subject "Education." (See Journal, June, 1906, p. 309.)

By C. B. Burr, Genesee: That a vote of thanks be extended to Dr. Inglis for his excellent paper and that the recommendations be referred to a Special Committee of which C. B. Stockwell, of St. Clair, is Chairman, he to select two other members.

Supported and carried.

7. Miscellaneous business.

By Dr. Flemming Carrow, Wayne: I beg to place in nomination for President of the Michigan State Medical Society the name of a gentleman whom you all know. His father was the first President of the Michigan State Medical Association. He himself, following in the footsteps of his sire, has been President of his own County Medical Society; he has been active in everything which pertains to medical advancement in his region of the state; he is an honored citizen of his city; he is respected by everyone there and he is beloved by those who know him well. I have the honor, Mr. President, to place in nomination the name of Dr. C. B. Stockwell, of Port Huron.

By W. J. Herdman, Washtenaw: That the nominations for President be closed. Supported and carried.

Adjourned.

SECOND DAY, THURSDAY, MAY 24, 10:30 A. M.

1. Called to order by President Inglis.



2. Unfinished business. The President appointed the following on the committee to procure a testimonial to Dr. iBddle: C. B. Burr, Genesee; Angus McLean, Wayne; C. T. Southworth, Monroe.

3. Report of the Committee on Venereal Prophylaxis, A. E. Carrier, Detroit, Chairman. (See p. 467.)

Report accepted and placed on file.

4. Oration on Surgery, by A. W. Crane, Kalamazoo. Subject, "Gastro-enteroptosis." Illustrated by X-Ray Plates in a Darkened Room.

5. Oration on Medicine, by B. H. McMullen, Cadillac. Subject, "Small Hospitals for Small Places."

6. New business.

By Wm. F. Breakey, Washtenaw: That the Council be requested to appropriate the sum of five hundred dollars for the relief of the suffering physicians in California.

Supported and carried.

President read a letter received from Dr. John R. Bailey, of Mackinac Island, containing an invitation to the Society to meet at Fort Mackinac in 1907.

Referred to the Committee on Nominations.

C. B. Stockwell, Port Huron, Chairman of Committee appointed to consider the several resolutions embodied in the President's address, made the following report:

Your Committee respectfully recommends, in accordance with the suggestions of the President in his annual address, the following resolutions:

*Resolved*, That a Standing Committee on Medical Education be appointed by the President to cooperate with the Council on Medical Education of the American Medical Association.

*Resolved*, That we heartily recommend the County Societies to take steps toward the education of the public in regard to the prophylaxis of venereal diseases by means of lectures, to which the public shall be invited.

*Resolved*, That in order to attain the highest efficiency in medical education in this state, giving the greatest number of instructors to a given number of students, together with greatly increased clinical facilities, we view with favor, the proposed amalgamation of the Medical Department of the University of Michigan and the Detroit College of Medicine.

C. B. STOCKWELL,

A. J. ABBOTT,

E. T. ABRAMS,

Committee.

These resolutions were all adopted.

Adjourned.

THIRD DAY, FRIDAY, MAY 25, 10:30 A. M.

1. Called to order by President Inglis.

2. Miscellaneous business.

a. C. H. Lewis, Jackson, read the following resolutions recommended by the Business Committee of the House of Delegates, who had been instructed to report the matter to the General Session:

*"Whereas*, Many of the Life Insurance Companies have notified their medical examiners of a reduction of the examining fee from \$5.00 to \$3.00, and

*Whereas*, We, as physicians, realizing the responsibility incident to proper examination of the individual, believe such reduction to be unjust; therefore, be it

*Resolved*, That the House of Delegates, in session assembled, do hereby declare such reduction to be unjust, and respectfully request that no physician legally authorized to practice medicine in Michigan, accept such reduction of fee.

*Resolved*, That it is the sense of the House of Delegates that hereafter in such examination for life insurance, the minimum fee shall be \$5.00.

*Resolved*, That the several component societies forming this State Society be requested to adopt these resolutions.

*Resolved*, That a copy of these resolutions be mailed to the several life insurance companies that have reduced the fee from \$5.00 to \$3.00."

Resolutions adopted unanimously.

b. A rising vote of thanks was extended to the Jackson County Medical Society, to the ladies of Jackson, to the city officials, to the street railway company, to the Jackson clubs, to the Elks and to all who had contributed to make the forty-first meeting so pleasant and successful.

3. Report from House of Delegates, B. R. Schenck, Secretary.

4. Oration on Obstetrics and Gynecology, L. T. Abrams, Dollar Bay. Subject, "American Gynecology."

A vote of thanks was extended to the orator.

5. The Committee on Nominations reported that C. B. Stockwell, of Port Huron, had been unanimously elected.

President appointed C. B. Burr and W. T. Dodge a committee to escort Dr. Stockwell to

the platform, where he was introduced to the Society and expressed his appreciation of the honor bestowed upon him. He also called attention to the coming visit of the National Organizer, Dr. McCormack, to our state, and urged the co-operation of the medical profession in making this visit a success.

By C. B. Burr, Genesee: That a vote of thanks be extended to our retiring President and new Secretary and other officers of the Society for their conscientious and excellent work in preparing for this meeting and the efficient and spirited way in which the exercises of the meeting have been carried out.

Motion supported and carried unanimously.

Meeting adjourned *sine die*.

(Signed) B. R. SCHENCK,  
State Secretary.

### Report of Council.

To the House of Delegates:

The Council submits the following report:

1. *Resignation of Dr. Leartus Connor, Councilor.* The Council reports with sincere regret the resignation of Dr. Connor. The vacancy created by his retirement from the Council was filled by the appointment of Dr. W. J. Herdman, of Ann Arbor, who assumed the duties of the position, January 1st, 1906.

Dr. Connor's services to the State Society during the work of reorganization have been of vast importance. To him, perhaps, more than to any other man in the Society has been due its rapid up-building and the establishment of its work on a secure foundation. His own optimism in reference to the work of organization and its importance to the profession, carried enthusiasm to others and was a potent factor in his distinguished success. As Chairman of the Council, he was efficient and faithful and that body has felt it a distinct loss to be deprived of his valuable suggestions and hopeful views.

2. *Retirement of Dr. A. P. Biddle, Secretary.* The Council has much satisfaction in placing upon record its tribute to the fidelity, efficiency, and untiring zeal of the late Secretary, Dr. Biddle. At considerable sacrifice because of the condition of his health he continued in the work until the reorganization of the Society was an accomplished fact. He saw its membership increase from 600 to 1,800. He established the Journal of the State Medical Society, a publication which immediately took an influential position among

medical journals throughout the country. His tireless energy and unselfish thought for the welfare of the Society, conjoined with integrity of the highest order and a charming personality, have endeared him greatly to our members.

It would seem fitting that the Society testify in a substantial way its appreciation of his work and worth and the Council would recommend that a Committee from the House of Delegates be appointed to procure a suitable testimonial to be presented to Dr. Biddle at the next meeting. The Council has authorized an appropriation of an amount not to exceed \$100 for this purpose.

3. *Secretaryship.* The Council elected to the office of Secretary of the Society, to succeed Dr. Biddle, Dr. B. R. Schenck, of Detroit, and since January the arduous work of the position, which involves that of editor of the Journal, has devolved upon him. The character of the Journal under his management speaks favorably of his editorial and business ability. He is a graduate of Williams College and of Johns Hopkins Medical School; was five years in service in Johns Hopkins Hospital; has been in practice in Michigan for three years and has filled important offices in connection with the Wayne County Medical Society.

### 4. Finances.

The following statement covers all transactions from January 1, 1904, to December 31, 1905:

Cash in Treasurer's hands Jan. 1, 1905..\$ 617.40

#### RECEIPTS.

Dues .....	\$3,604.12	
Advertising (gross) .....	2,005.30	
Subscriptions to the Journal...	7.17	
Blanks for County Societies...	2.20	
Refund (R. R. and Adv. Com.) .....	6.95	
		5,625.74
Total .....		\$6,243.14

#### EXPENDITURES.

##### Journal—

Printing of Journal .....	\$2,967.00
Putting in envelopes and mailing of Journal .....	77.70
2 ct. stamps (mailing to Detroit members) .....	84.76
Postoffice (second class rate) ..	61.25
Salary of Editor .....	300.00
Mailing list .....	70.80
Etchings .....	66.45
Advertising commission, 20% ..	400.94
Stamps, stationery, etc.....	73.33

Printing Adv. Contracts and Rate Cards .....	5.50	
Copyright .....	6.00	
Advertising Commission (W. P. Long, New York Agent, 25% .....	34.75	
Office help .....	67.50	
Envelopes for Journal .....	18.10	
Telegrams to advertisers.....	1.00	
Exchange .....	6.31	
Express .....	3.00	
Binding Journals received.....	18.75	
Subscriptions .....	.60	
Incidentals .....	1.52	
		4,265.26

#### State Society—

Printing .....	\$ 54.10	
Salary of Secretary .....	300.00	
State Society Meeting .....	84.89	
Stamps, stationery, etc.....	73.30	
Secretary's expenses at State, District and County Soc., .....	83.12	
Office help .....	62.50	
Program of Annual Meeting, 1905 .....	47.00	
Council Meeting, Jan., 1905...	20.00	
Councilor's expenses .....	11.14	
Meeting Committee on Scientific Work .....	4.00	
Card Index Case .....	5.35	
Exchange .....	6.29	
Express .....	1.55	
Telegrams and telephones ....	5.15	
Refund Mich. Passenger Association .....	6.00	
Incidentals .....	8.01	
		772.42

Total Expenditures .....	\$5,037.68	
Cash in Treasurer's hands Dec. 31, 1905 .....	1,205.46	
Total .....	\$6,243.14	

#### 5. Membership.

The membership of the Society on May 22nd is 2,001. Of these 1,509 have paid for 1906.

6. *The Journal.* The Journal has been regularly mailed to all of the members. On account of the printers' strike, there has been some difficulty in getting the issues out on the first of the month, but arrangements have now been made which will apparently obviate the trouble.

The Council believes that the Journal has been improved during the past year, both as to the scientific value of the papers published and as to the amount and interest of other matter. That

the papers have been better is evidenced by the fact that there have been more abstracted in other journals than ever before. However, they may be much further improved if those in charge of the program of the state and county societies see to it that the standard of papers read is high.

The Journal should be the medical newspaper of the state but this can only be done by the co-operation of the County Secretaries. Some few Secretaries are diligent in this matter, sending in reports of meetings, personal items and medical news—others are never heard from, despite repeated requests from the editor. If certain sections of the state have apparently been represented better than others in the columns of the Journal, it has been simply because the material from those sections has been sent in. The whole state should be included, but this can only be accomplished by co-operation with the editor on the part of the County Secretaries who compose the staff of correspondents.

More papers are received than can be published without incurring unwarrantable expense. The Journal for 1904 contained 576 pages and for 1905, 628 pages. The issues thus far in 1906 have been larger than ever before, the first five issues comprising 308 pages, as compared with 240 for the first five months in 1905.

From the viewpoint of the advertiser, the value of the Journal has also apparently been enhanced.

In the May, 1905, issue there were 32 advertisements, bringing in \$167.04. In the May, 1906, issue there were 36 advertisements bringing in \$205.84. There have been lost during the year, 4 advertisements, aggregating 1¼ pages and representing \$11.70. There have been gained 8 advertisements, aggregating 5¾ pages, and representing \$50.00. The net gain therefore has been 4 advertisements, amounting to 4¾ pages and increasing the Journal's income \$38.80 per month.

At the January meeting of the Council, the Secretary-Editor was instructed to advertise for estimates for printing the Journal. This was done and estimates were received from nine firms, both within and outside of Detroit. These figures were reviewed by the Publication Committee of the Council and a contract for the remainder of 1906 let to the present printer. If the Journal remains the same size as in 1905, the saving will be about 25%. Under the new contract more favorable prices (practically cost) have been secured for reprints of articles appearing in the Journal.

7. *Names proposed for Honorary Membership.* In accordance with the provisions of the Con-



stitution. Sections 5 and 6 of Article 4, which provide that not more than five resident honorary members and not more than two non-resident honorary members shall be nominated by the Council and may be elected by the House of Delegates at the annual meeting following such nomination, the Council recommends for this honorary position the following:

Dr. William Parmenter, Vermontville.

Dr. Johann Flintermann, Detroit.

Dr. T. N. McCormack, Bowling Green, Ky.

(For additional nominations see p. 455.)

8. *Councilor District Meetings.* Highly successful Councilor District Meetings have been held during the past year in the Twelfth District, Councilor Felch; Eleventh District, Councilor Dodge; in the Seventh District, Councilor Willson; in the Fifth District, Councilor Spencer; in the Third District, Councilor Haughey; in the First District, one during Dr. Connor's Councilorship, and another subsequently under Councilor Herdman.

These meetings with their combined scientific and social features have been found vastly interesting and profitable, and the policy of the House of Delegates in recommending and promoting them has been abundantly justified.

9. *County Societies.* Reports from the County Societies published in the Journal and communicated through the officers and Councilors indicate that most of these organizations are in a flourishing condition. In the interests of better work, the Council has permitted the consolidation of the County Societies of Kalamazoo, Van Buren and Allegan, in the Fourth District.

10. *Two Day Session.* It is believed by the Council that it would be good policy for the Society to return to the two days' session. It was impracticable to hold the attention of members thoroughly at the three days' meeting in Petoskey. What the experience of the present meeting may be, remains to be seen, but it is the opinion of every member of the Council who has expressed himself in the matter at all that the former plan is the better one and that it would be well in view of the increasing number of papers presented yearly to the Society that attention be devoted strictly to section work. To this end it is recommended that at the 1907 meeting there be a two days' session; that the first meeting of the Council be held in the afternoon and that of the House of Delegates in the evening of the day before the opening of the regular session; and that the orations be omitted.

To make this change would involve certain amendments to the By-Laws. In any event, the Council recommends that a committee be appointed to revise the Constitution and By-Laws.

11. *Medical Ethics.* At the January meeting of the Council the following resolution was unanimously adopted:

"We recommend that the Chairman of this Council incorporate in the report to the House of Delegates a request that the Michigan State Medical Society consider the advisability of recommending that medical colleges add to their curriculum a chair, or at least a branch, of Professional Ethics; that this subject should be taught in such a manner as to inspire the pupil with an understanding that his honor is involved in maintaining the ethics of the profession, in the same manner as individual honor has always been involved in questions of right and justice."

Apropos of this resolution an editorial in the Journal of the American Medical Association of February 24th, from which the following forceful extract is reproduced, is of interest:

"One of the ways in which most, if not all, of our medical schools have failed to do their duty has been in graduating students into professional life without having given them the slightest idea of the economics of medicine. No word of those principles of ethics which should govern the conduct of medical men has been taught them. Medical students have had no instruction on what should be their relations to their fellow-physicians and to the profession in general or to the people whom they are to serve. Thus, ignorant of what they should know, they step into professional life and at once begin to make blunders. Who of us can truthfully say that, during the earlier years of his professional life, he did not do many things which were not in accord with that spirit of honor which should have guided him, and this so solely because he knew no better? Not only have the colleges failed to teach the student what should be his future attitude toward his professional brethren, what he should do and what he should leave undone, but they have also failed to instill into the student's mind that spirit of "Unity, Peace and Concord" which he most needs."

12. *Life Insurance Examination.* The Council recommends to the House of Delegates, action by resolution or otherwise, in the interest of insurance policy holders, approving of the position of those medical men who have stood out against the false economy of life insurance com-

panies, that in a spasm of virtue have reduced fees for medical examinations. In conscientious and careful action on the part of the examining physician lies the only security to companies and their clients, and the best obtainable examination is none too good. It would seem fitting that a ringing resolution resisting lowering of fees and demanding adequate compensation for insurance examination be adopted by this Society.

13. *The Future.* Organization has progressed well in the Michigan State Society, but in the vigorous language of Councillor Herdman, "it must be a means and not an end or disintegration will soon set in. There must be shown that there is plenty of work and valuable work to do, such work as a single body of this sort alone can do effectively, sanitary, hygienic, prophylactic, legislative—looking to the improvement of human conditions.' In this connection it is of interest to point to the remarkable gathering held in Detroit last winter to consider the question of the restriction of the spread of venereal diseases. This Society is to be congratulated upon being a pioneer in this movement and it is a source of much satisfaction that the inspiration back of this meeting came from a valuable scientific paper presented by a member of this body to one of its sections. Similar work in other lines may be done in future and it behooves the State Society in the interests of advancement to assume new and wider functions. To stand still is nerveless and uninfluential, so an organization of this character, unless it can be made a practical factor in the solution of the problem presented by the advance of civilization, will never attain a high measure of usefulness.

All of which is respectfully submitted.

Signed: C. B. BURR,  
Chairman.

#### **Report of Committee on Legislation and Public Policy.**

Your Committee on Legislation and Public Policy has nothing to recommend to you at this time except that the profession be alive to resist and defeat any effort to modify existing laws governing the practice of medicine in Michigan. The statutes under which the State Board of Registration in Medicine is today acting are satisfactory and should not be changed. Any move to do this might come from special interests which should not be recognized.

It is hoped and believed that in the future this

Committee will have the same loyal and united support that it has had in the past.

(Signed) W. H. SAWYER,  
Chairman.

#### **Report of the National Legislative Committee.**

The National Legislative Committee is the direct representative of the American Medical Association. This Council has a member in each state of the United States, and he appoints someone his auxiliary. It is the duty of the Council with its auxiliary members to keep close watch of such legislation as affects medical men and medical matters; that which appears before our national legislature and also that which comes before our local state legislature. You will thus see that the Council has a very important duty.

With Dr. Reed, of Cincinnati, at its head, it has succeeded during the past year in securing such legislation as we thought would redound to our best interests.

It is a pity that as soon as a bill which appears to meet and does really meet the requirements of the individuals is prepared and presented to the Senate or House of Representatives of the United States there are a number of medical men throughout the country who immediately flock to the National Council with a view of being appointed on some committee in connection with the bill, so that if one House passes a bill and it is sent to the other House immediately amendments are made to the original bill, and it is our experience that as soon as amendments begin to be made the value of the original bill is at once destroyed.

The bill which was presented and claimed our attention first and foremost was the pure food and drug bill. The present status of this bill is as follows: It passed the Senate and was sent to the House; immediately our medical friends throughout the country flocked to Washington and began to tack amendments to this bill which was really a very excellent bill; it was put into the hands of a committee from the House of Representatives and there it remains with but very little of the original bill left, but with very lengthy amendments destroying in effect the force of the original bills. We will probably not get a pure food and drug bill passed this season.

In our army we have never had enough surgeons nor has their rank been sufficiently high; their suggestions have been overruled, in many instances causing unhealthful conditions to prevail. The Council has been endeavoring to learn

something from the way in which medical men in the Japanese army govern affairs and have patterned after them somewhat in framing a bill which has been presented to Congress, but which still hangs fire.

The Council has been and is still carrying on a crusade against nostrums.

The Council has endeavored to have a Department of Health established whose head shall be a member of the Cabinet. This seems to be impossible of accomplishment, although a bill providing for a Bureau of Health under the direction of the Secretary of War or of Agriculture may be put through.

All of which is respectfully submitted.

(Signed) FLEMMING CARROW.

#### **Report of Committee to Encourage the Systematic Examination of the Eyes and Ears of School Children Throughout the State.**

The committee appointed to encourage the systematic examination of the eyes and ears of school children throughout the state has the honor to make the following report. The high schools in Detroit, Bay City and Ann Arbor are being systematically examined and we are assured in the fall that the work will be taken up in Grand Rapids, Port Huron and Pontiac.

While the work has been slow, opposition coming from parents, teachers and, I regret to say, the medical profession, the tide of opposition is rapidly turning and another year is almost certain to see the authorities of all the larger schools in the state inaugurating the work. It is an innovation along educational lines and is, therefore, necessarily slow.

The scheme of Dr. Allpost embodied in our 1st report has been adhered to and found on the whole satisfactory.

Cards are furnished by the use of which the vision of the patient can be obtained, and the teacher is asked to determine the following facts:

##### **FACTS TO BE ASCERTAINED.**

1. Does the pupil habitually suffer from inflamed lids or eyes?
2. Does the pupil fail to read a majority of the letters in the number XX (20) line of the Snellen's Test Types, with either eye?
3. Do the eyes and head habitually grow weary and painful after study?
4. Does the pupil appear to be "cross-eyed"?

5. Does the pupil complain of ear ache in either ear?

6. Does matter (pus) or a foul odor proceed from either ear?

7. Does the pupil fail to hear an ordinary voice at twenty feet in a quiet room?

Each ear should be tested by having the pupil hold his hand over first one ear, and then the other. The pupil should close his eyes during the test.

8. Is the pupil frequently subject to "colds in the head" and discharges from the nose and throat?

9. Is the pupil a habitual "mouth breather?"

If an affirmative answer is found to any of these questions, the pupil should be given a printed card to be handed to the parent.

It will thus be seen there is nothing required in the examination that can not be obtained by teacher or parent.

For the information of the Society a review of the progress of the work will be given, together with the results of the work done in one of the schools in Detroit.

The original resolution adopted at the New Orleans meeting of the American Medical Association read as follows:

*Whereas*, The value of perfect sight and hearing is not fully appreciated by educators, and neglect of the delicate organs of vision and hearing often leads to disease of these structures, therefore, be it

*Resolved*, That it is the sense of the American Medical Association that measures be taken by boards of health, boards of education, and school authorities, and, where possible, legislation be secured, looking to the examination of the eyes and ears of all school children, that disease in its incipency may be discovered and corrected.

Since then these resolutions have been adopted by the State Medical Societies of twenty-one states, and by the Boards of Education of nine states, Michigan being included in each list.

The State Legislature of Connecticut and Vermont have incorporated this movement in a public law and the Governor of the State of Massachusetts in his message to the last legislature, strongly recommended that the annual systematic examination of public school children's eyes and ears be ordered by the law-makers of the state.

The Vermont law seems to be the better of the two, not only because it specifically states that the examination shall be made in September, but



because it includes ear defects. The Connecticut law requires only the eyes to be examined.

The Vermont law reads as follows:

The State Board of Health and the Superintendents of Education shall prepare or cause to be prepared suitable test cards, blanks, record books, and other needful appliances to be used in testing the sight and hearing of pupils in public schools, and necessary instructions for their use; and the Superintendent of Education shall furnish the same free of expense to every school in the state. The Superintendent, principal or teacher in every school during the month of September in each year shall test the sight and hearing of all pupils under his charge, and keep a record of such examinations according to the instructions furnished, and shall notify in writing the parent or guardian of every pupil who shall be found to have any defect of vision or hearing, or diseases of eyes or ears, with a brief statement of such defect or disease, and shall make a written report of all such examinations to the Superintendent of Education as he may require.

Section 2. The State Auditor is hereby directed to draw his order on the State Treasurer for such sums and at such times as the Superintendent of Education, with the approval of the State Board of Health, may require to carry out the provisions of this act. The total expense under this act shall not exceed six hundred (\$600.00) dollars in any biennial term ending June 30.

The advisability of recommending the adoption of a resolution by the Society urging the legislature to pass a law similar to the one in Vermont seems to your committee to be inadvisable at this time because of the inability to enforce such a law. Not until teachers more fully appreciate the important relation between the physical and the mental can good results be obtained. The educational crusade must come first.

The results to be expected from the work may be illustrated by stating that in one of the high schools in Detroit where the work was carefully done, out of 675 scholars examined, 409, or 58.8 per cent, were found to have some eye or ear defect or subject to headache. This, too, in a community where every facility is offered for all classes to obtain treatment. The percentage in localities where such opportunities are not afforded may go as high as 75 or 80 per cent.

Respectfully submitted,

WALTER R. PARKER,

CHAS. H. BAKER,

JOHN R. ROGERS,

Committee.

### Report of the Committee on "The Patent Medicine Evil."

The main factors responsible for the existence of the patent medicine evil to-day are three: the physician, the press—lay, religious, and medical—and the law-makers.

Until recently an inactivity characterized the physician in combating the growth of the patent medicine fraud. The ancient history of this evil has not revealed the physician as clad in armor, or as wearing a halo. Courage was lacking. The force that always lies in a thing inherently right was underestimated and distrusted.

An evil characterized by greed, and leaving in its wake those wrecked in body and mind, even those wantonly deprived of life, has grown and pressed upon us each year.

Why, until recently, have we remained passive? Why, pushed back, have we protested but not resisted? The answer is not difficult.

With little organization, we have been confronted by an organized force. We, a band of scouts, have been trying to hold back an army. There has been too much individualism, too little massed strength. There has been more segregation than concentration. There has been that lack of unity that comes with a lack of organization, not such an organization as is animated by commercialism, but one animated by that spirit or fraternalism and that love for humanity to which Isaiah gave utterance three thousand years ago: "The spirit of the Lord is upon me because . . . he hath sent me to heal the broken-hearted, to preach deliverance to the captives, and recovery of sight to the blind, to set at liberty them that are bruised." Possessed with this spirit, the harmony and union which have already begun should become universal.

A second cause of inaction is the failure to enlighten and enlist the people. For years, left in their ignorance and innocence, they have been duped. Their instruction (?) in bodily ailments and infirmities has been left largely to misleading and falsifying advertisements which have flooded the press, and to booklets placed in confiding hands, giving that information which insures to the reader the possession of a category of diseases, of which each patent medicine advertised is a cure-all.

We, unorganized in our own defense and so in theirs, have been indolent and have not taught them better things. An inheritance of mystery and secrecy, with which we are still inclined to impress the sick and their friends, has come down

to us from times remote. But why? The Delphian oracles are certainly not a part of our modern equipment.

Better that the public have some knowledge of things medical than none at all! Better that that knowledge be pure than tainted! A little learning may be a dangerous thing, but reasonable enlightenment and instruction of the laity will diminish blind confidence in quackery. Physiology and hygiene revealed to an intelligent people have raised the art of living to a higher plane.

More instruction, properly directed, in a public as well as in a private way, will draw to us that confidence which has been misdirected. It will make the people our allies and form a public opinion giving impetus to our work.

Medical organization with such public opinion can in turn secure efficient legislation. The sacredness of human life demands better safeguards. More legislation is directed to the weevil threatening the cotton, to the gypsy moth threatening the trees, to the foot rot and glanders infesting animals, than against quacks whose ignorance cuts short human life, and nostrum vendors who play with human existence with the recklessness of the dice throw—a game of greed and graft.

Conditions so unjust cannot remain unchanged. The state must demand a higher order of medical intelligence and more efficient protection.

An awakening that comes with better organization and unity among the medical profession, a better intelligence among the laity regarding things medical, and an enlightened conscience on the part of the state, are important factors, but by no means small. These are but parts of the machine. The dynamics rest in those agents already mentioned: the physician, the press, and the law-maker.

Inherent defects are in each. The physician himself must take a higher stand. To be commanding he must be well equipped, not with an equipment which is incomplete, for which the schools are largely responsible; not with one which is furnished by so many schools in which, as one writer says, "Medical therapeutics is overshadowed to an undue degree by pathology and diagnosis."

That physician is weak who is brilliant in surgery yet knows little of materia medica, pharmacy and chemistry. These fundamentals are slighted because they are not dazzling.

Another writer dealing with the nostrum evil recently said: "Insufficient instruction in materia medica, pharmacology, pharmacy and chemistry offered by schools of medicine is the direct cause

of present conditions." Certainly incompetency begets servility, and places many a physician at the chariot wheels of the nostrum makers.

Yet, to the competent physician, the reputable pharmacist holds a place of importance. He is needed and gives valuable assistance. The day of nauseous and disagreeable potions should be past. There is a demand for elegant and palatable preparations; the pharmacist fills it.

The manufacturer adds to our medicines many that are of value, but thousands that are unnecessary. Said a prominent commercial traveler for a well-known drug house: "Medicines are made to sell." When and how to use the few that are of inherent worth and are made for use is a knowledge invaluable. Running up and down the gamut of a polypharmaceutical tablet triturate case may be interesting to yourself, but it is not beneficial or kind to the patient for whom you prescribe. Subservience to anti-disease named remedies and hit-everything-at-forty-rods proprietary preparations does away with professional dignity and manliness and leads to the tent of the nostrum vendor. We are not blind to the fact that the majority of proprietaries are nostrums.

As to the press! What is the attitude of the lay, religious, and the medical press to-day? A quarter of a century ago it was universally subsidized by patent medicine manufacturers and quacks. It was not looked for that the lay press should take a high moral stand, but it was paradoxical that the religious press should disgrace itself by a Jekyll and Hyde existence—pointing to the loftiest ideals of a higher life in one column, while aiding the patent medicine dealers and unscrupulous charlatans to swindle the innocent public in another.

The medical profession, however, can throw but few stones. Our house is of glass. Many of the advertisements carried by medical journals far and wide were and are a disgrace. We have known it, we have acknowledged it, yet we have allowed it and are allowing it still.

The religious press can be pardoned for some of its former shortcomings because of thoughtlessness and ignorance. The Apostle Paul once said in excuse for certain Jewish shortcomings: "The times of their ignorance God winked at," but no ignorance is ours at which either God or man can wink. We have stood before the public stultified.

In the past the entire press conscience was limber and elastic. The entire press—lay, religious, and medical—could be bought for a price. To-day a transformation is taking place. The

highest representatives of that branch of the press from which we expected the least—the lay press—are in the lead. Great honor is due them. The five greatest magazine publications in this or any other country, whose circulation is the most extensive known to the world, not only admit no advertisements to their pages from charlatans and patent medicine houses, but are doing everything in their power to put them out of business. Many lesser lay publications have “seen the light” and are lending their influence. We find that many are quietly refusing pseudo-medical advertisements that would have been received a few years ago without question.

The revenue from the patent medicine man means much to the country paper with a small circulation, whose editor must be alive to financial necessities. The wisdom of the remark of the medical student with a light purse, “It is fifty dollars damages to a man to be poor,” is keenly appreciated. The more prosperous city editor and proprietor, with a larger revenue, can take up and consider the morals of the question with more equanimity.

As to religious papers and journals, a few which stand first in moulding public opinion occupy an unassailable position. Further, the space occupied by fraudulent medical advertisements in all religious publications has been reduced four-fifths in the past five years. While the medical advertisements of all sorts are far less, the great majority are stated modestly; others are rank and suggestive, though veiled.

Strange to say, in looking over many religious papers, an advertisement for the cure of hæmorrhoids seems to occupy more prominent places and more space than any other. This naturally would lead us to believe that there must be a remarkable affinity between piety and piles.

The only church papers found that carried no medical advertisements of any description were those of the German Evangelical denominations. In looking over eight prominent denominational papers published by each of four great religious bodies, your committee found on an average seven medical advertisements of all kinds in the papers of two denominations, five in another, and four in another. The boast has been made, we are told, by the management of one of these papers (a Michigan paper) that it pays very large dividends, so that a surplus is turned over each year to a fund set aside for the support of superannuated ministers. It is not to be wondered at, for we found no other paper carrying so large a number of quack advertisements, some of them par-

ticularly bad. The money may not be tainted, but it has an off-odor.

The question now is, how best to reach the medical, religious, and lay press.

The medical press naturally would carry medical advertisements. A consensus of opinion on the part of physicians does not demand their total exclusion. It should, however, demand that only honest claims for honest and worthy preparations, made by honest and reliable houses, and with the ingredients honestly stated, be admitted to any medical publication asking our support. Otherwise, such support, either by way of subscription or contributed articles, should be withdrawn. Our national and state society journals can be made to conform to this standard, and should receive our strongest support.

As to the religious press, it never had a call to admit any advertisements bearing even remotely on medical subjects. Needless to say, this was never an object in its establishment. In the years past when religious bodies fought over theories and dealt with dogmas rather than with applied Christianity and righteous living, this pseudo-medical fraud crept in and made the religious press its host. Money lavishly given hindered its being driven out. To-day the temple of the religious press, as already indicated, is being cleansed.

A conscientious religious man, when led to see an evil, is the most strenuous fighter known. The church is aroused and religious associations all over the land are making the patent medicine fight their own.

A case or two in point: An editor of a religious publication in Boston, armed with a letter written by a member of the Michigan State Medical Society, and showing the inconsistency of carrying any medical advertisements, went before his managing board with the result that all such advertisements were thrown out. The Congregational Association of Michigan four years ago withdrew its support from a state paper, published in its interests, largely because the editor and manager insisted upon carrying objectionable medical advertisements. This action killed the publication. The state journal of that association now carries no advertisement of a medical nature. Not only this, but, through the suggestion of a physician to a member of the business committee, a resolution protesting “against immoral and fraudulent advertising in religious papers,” and urging the publishers of all their denominational periodicals to “cease the endorsement of quack liquor and drug laden medicines.



... with which unscrupulous men seek to defraud the innocent public," was passed by the association unanimously and with enthusiasm in 1904.

Clergymen of other religious bodies have been interviewed by your committee, and will see that similar resolutions are introduced at the annual meetings to be held in the near future.

On April 8th of this year the Miami Presbytery of Ohio drew up a strong memorial, asking the General Assembly of the Cumberland Presbyterian Church to "direct its Board of Publication, through its agents, to refuse all advertisements of a medical character unless approved by a special board composed of three physicians." These resolutions voice the sentiment which is growing all over the country. Individual support and aid on the part of medical men connected with religious bodies will be all that is necessary to cleanse every religious periodical in the near future.

Regarding the lay press: the fight which the greater journals and newspapers are making for pure drugs and against nostrums should have our support and aid in every way possible. It is a forerunner of better things that three of the Chicago dailies are championing the "Pure Food Bill"—calling for a descriptive labeling of mixtures which are uncertain and pernicious, and are made to deceive the trustful public.

To our minds, some progress can be made by investigating the bald and untruthful claims made in the local press of each county by medical adventurers. The majority of the lay press stands ready to champion the cause of the people where evidence of fraud can be shown and swindlers are unearthed. That some effort may be made in this line leads the committee to suggest that a recommendation be made to each society to appoint a committee of one on special and legislative work, who shall, in connection with legislative work to be hereinafter mentioned, make a study of the patent medicine field in his vicinity and from time to time make a report to his society with a view to diminishing the fraud.

Incidentally, such a committee would be in a position to protest efficiently against those druggists becoming practical partners with nostrum makers who have permitted their names to be appended to nostrum advertisements as if endorsing their preposterous claims.

Finally, what of the law-makers? President Roosevelt, in a message to Congress in December last, recommended that a law be enacted to regulate interstate commerce in misbranded or adul-

terated foods, drinks and drugs. Congress is doing what it can toward passing a satisfactory "Pure Food Bill," the Postoffice Department toward restricting the use of the mails, and the War Department in prohibiting the shipping of patent medicines laden with alcohol to the Indians. Commissioner of Internal Revenue Yerkes is to be commended in requiring an internal revenue tax to be placed on patent medicines containing a certain per cent of alcohol. Most of the legislation, however, restricting and regulating the patent medicine trade must be done by states. Two hundred and fifty million dollars stands opposed. Against this opposition brass bands and glowing resolutions will not win. Organized and persistent effort alone will win.

Some states have made a good start in the matter of legislation. North Dakota passed a law requiring preparations containing 5 per cent of alcohol or opium and its derivatives, chloral, cocaine and other deleterious drugs, not called for by a physician's prescription, to be labeled. Since then the Proprietary Association of America has declared its intention of refraining in the future from contributing to Dakota's patent medicine wants.

"Michigan," says Samuel Hopkins Adams in Collier's, "has a strong law, but does not enforce it."

Germany and England are at work on anti-nostrum laws. New Zealand, said to be the best governed country in the world, requires formulas of all proprietary medicines to be lodged with the health department. This has led many proprietary manufacturers to cease exporting their preparations to that country.

A bill to regulate the manufacture and sale of patent and proprietary medicines has been carefully prepared and appeared in the Ladies' Home Journal of February, 1906. This bill, or a similar one, should be introduced into the legislature of this as well as every other state at as early a date as possible. In addition to state legislation, your committee deems it advisable that efforts be made to have an ordinance passed in each city of the state prohibiting the distribution of any sample medicines except when they are placed in the hands of adults; this with a view to shielding the children.

To insure that proper medical legislation be carried out leads your committee to repeat the suggestion already made, that each county society be asked to appoint a committee (preferably of one) on special and legislative work, who shall keep in touch with the legislators in his district,

and shall keep the members of his society well informed, and so secure their aid in driving out the "Great American Fraud"—the patent medicine evil.

C. B. STOCKWELL,  
WM. F. BREAKER,  
GEO. C. HAFFORD,  
Committee.

#### Report of Committee on Venereal Prophylaxis.

Mr. President, and Members of the Michigan State Medical Society:

The first meeting of the committee was held in Ann Arbor at the office of Dr. Herdman, soon after the State Society adjourned, and plans adopted for the furtherance of the work. Your committee realized the necessity of being well grounded in any proposition that they might consider proper to bring before the general public regarding the prophylaxis of venereal affections. Statistics are not always reliable, even when we are considering diseases that have not been shamefully contracted, but when it comes to venereal affections, data as to morbidity resulting from these diseases must be carefully considered in order that statements made may not have to be contradicted. It was realized that there was a necessity for a literature carefully prepared, that could be circulated freely among the people, giving facts regarding these affections, such as their frequency, their seriousness, the sequelæ, and the dangers of their being contracted innocently, etc., etc.

Public conventions had never been held to consider venereal prophylaxis, and the question was how such meetings would be received by the public. It was decided that a test should be made in Detroit under the auspices of the Wayne County Medical Society on December 18, 1905, and a program for that meeting was outlined as follows:

#### PUBLIC MEETING FOR A DISCUSSION OF SANITARY AND MORAL PROPHYLAXIS.

Three-minute talks on the Prevalence and Ravages of Venereal Diseases, as follows:

Nervous Affections Due to Venereal Diseases, Dr. W. J. Herdman, Ann Arbor.

Cost to the State of Patients Who Are in Our Asylums as the Result of Venereal Diseases, Dr. C. B. Burr, Flint.

Venereal Affections as Seen in Surgery, Dr. H. O. Walker.

Venereal Affections as Seen in Ophthalmology, Dr. Flemming Carrow.

Venereal Affections as Seen in Otolaryngology, Dr. Emil Amberg.

Venereal Affections as Seen in Pediatrics, Dr. C. G. Jennings.

Venereal Affections as Seen in Gynecology, Dr. J. H. Carstens.

Venereal Affections as Seen in Dermatology, Dr. A. E. Carrier.

Restriction of Venereal Disease from the Public Health Standpoint, Dr. G. L. Kiefer.

It was the intention of the committee that these short talks should be given in language easily understood by the laity, and that the papers should be printed in the State Journal, reprints of which would supply in part the literature needed in our work.

The reading of the papers was followed by short talks by Prof. Vaughan and Dean Hutchins of Ann Arbor, Rev. A. H. Barr, Rev. L. S. McClester, Rev. S. S. Marquis, Rev. C. L. Arnold, Rabbi Franklin, and Prof. F. L. Bliss of Detroit. The lay and clerical speakers expressed great surprise at the, to them, astounding morbidity of venereal diseases as stated by the several medical speakers who had preceded them, and expressed their willingness to co-operate in any effort that might be made to educate the people as to the danger of these affections. The audience was impressed by the facts brought to their notice in this public manner in a way that no other means could have accomplished, and it demonstrated to your committee that the public was ready for instruction in venereal prophylaxis. One result of this meeting has been requests for speakers for church clubs, for fraternal societies, for labor organizations, etc., who would discuss prophylaxis. At one such meeting at which your chairman was the speaker, the pastor made the remark in closing that he thought that talk would decide the matter in his church regarding the using of "individual communion cups." It is easy enough to get audiences now to listen to discussions of this nature. As Keys has said, "We seem to be in a time which is psychologically right for this sort of work." The field is ready, and the need is now for workers.

At the Detroit meeting, on motion of Dr. Herdman a committee of six was appointed who were to enlarge the membership of the same by selecting fourteen representative men and women from the state, and this committee was then to organize within one year from the date of its appointment

a society composed of the different professions, trades, business, etc., to have charge of the work. As the work of this committee is in part the work of your committee, I will give in short its doings up to the present time. It has held one meeting, and appointed the following sub-committees, and has added to its membership Dr. Vaughan, Dr. Varney, and C. A. Kent.

Education Committee—Dr. Herdman, Rev. A. H. Barr, and Prof. F. L. Bliss.

Publication Committee—Dr. Carrier, Dr. Varney.

Legal Enactments Committee—Dean Hutchins, V. C. Vaughan, C. A. Kent.

Reciprocity Committee—Dr. Biddle.

A meeting was to be held in two months to consider reports from these sub-committees, but, owing to the illness of two members, no meeting has been held, and it has been thought best to defer a meeting until after that of the American Medical Association, where, as you are all aware, venereal prophylaxis is one of the chief topics for discussion. From those who are to take part in that discussion we hope to get valuable data to incorporate in our work in Michigan.

Two International Congresses have been held in Brussels to consider venereal prophylaxis. Berlin has a society two years old that is large enough to support two publications, one for the public and one for the profession. In Paris one has been organized for four years, and it publishes bulletins for general circulation; while in this country societies are being organized in New York, Boston and Philadelphia, all having the same object in view, viz., publicity.

The Detroit meeting was the first one ever held to discuss venereal diseases, and Dr. Denslow Lewis of Chicago came to the meeting in order that he could say that he was present at the first meeting ever held in this country to discuss publicly venereal prophylaxis.

There is no doubt but the action of this society through this committee will be an incentive for other state societies to follow. From correspondence we know that others are looking to see what the outcome is to be in Michigan, and it is essential that, as a society and as individuals, you give your hearty support to this effort. Societies may be organized for this work, but their

guidance must be in the hands of the medical profession, but the minister, the lawyer and the teacher will give most valuable assistance.

(Signed) ALBERT E. CARRIER,  
WM. J. HERDMAN,  
ANDREW P. BIDDLE,  
Committee.

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## County Society News.

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### IONIA.

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The Ionia County Society met May 31st, at Portland, with the largest attendance yet recorded.

Dr. G. E. Stanton, of Belding, read an interesting paper on Melancholia, which was discussed in a scholarly manner by Dr. W. L. Barnes. A general discussion followed in which nearly every one present took part.

Dr. Jas. E. Ferguson, of Belding, presented a clinical report of the satisfactory use of Aspirin in asthma and kindred diseases.

Considerable time was taken up discussing ways and means as to best methods in handling the credit system in medical practice and endeavoring to formulate some plan by which the "dead beat" might be placarded and known when he settled in a new place or a new doctor came where he lived. All motions to take immediate action were tabled pending further consideration of the matter. An earnest discussion came when it was mentioned that several members of the society never attended meetings, and never contributed by paper or clinical report to the society work. And some were severely criticised because they persistently refused to pay dues although one or more years in arrears. In one case it was cited that one member of the county society was holding an important position on one of the state committees and at the same time was two years in arrears and had never attended a meeting of the society. Inasmuch as a county is entitled to but one place on a state committee it was expressed by motion as the desire of the society that this place be given to some one of the county medical society who had been and is now an active worker in his local society and the Secretary instructed to write the Secretary of the State Society regarding this matter.

The names of Drs. L. F. Hoag and George P. Winchell were added to the list of membership.



The next meeting will be held in Ionia, November 8. This being the annual meeting, the time will be taken up largely with the election of officers for 1907.

Full program will appear in October.

C. S. COPE, Sec'y.

Note: The above action refers to a committee which was discharged at the Petoskey meeting in 1905.—Editor.

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**A Correction.** In the June issue we published an article by Edward J. Bernstein, of Kalamazoo, on "Ear Conditions of Interest to the Family Doctor." This paper was read before the Calhoun County Society in April and before the Berrien County Society in December. It was erroneously printed under the proceedings of the Kalamazoo Academy of Medicine.

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## Correspondence.

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Editor Journal of the Michigan State Medical Society:

Sir—Your June issue contains a paper by J. O. Schlotterbeck, Ph.D., on "The Popular Synthetic Remedies," from which we beg leave to quote the following:

"By prescribing hexamethylenamina, the physician receives an article that is uniform and whose purity and quality can be controlled by the tests of the Pharmacopœia."

If a physician prescribes hexamethylenamina, the pharmacist is very likely to select one of the cheap brands of the drug, and that will certainly be a poor one. It is an error to suppose, as your contributor does, that the pharmacist will always select the best brand, or, indeed, one which will always respond to the Pharmacopœial requirements, since inferior brands are cheaper. Thus, according to the findings of L. F. Kebler, of the U. S. Department of Agriculture, most of the glycerins used do not answer the Pharmacopœial tests.

The profession knows that certain brands of chemicals distinguish themselves for excellence, and hence it frequently specifies on prescriptions "Squibb's" ether, "P. & W.'s" quinine, etc. It is recognized that not all ether and quinine is of the same quality, and the physician endeavors to safeguard against the dispensing of an inferior product.

Urotropin, which is the original product, and on which all the literature is based, was introduced by us in 1894. Soon afterwards imitative products appeared on the market. Urotropin distinguishes itself from its substitutes by the dazzling whiteness of its large, regular, non-agglutinating crystals and by its odorlessness, as a test will show. Many cases of untoward effects produced by imitative products are on record.

Thus the late Dr. Chismore, one of the noted genito-urinary surgeons of the West, published a report in the *Journal of Cutaneous and Genito-Urinary Diseases* September, 1900. He used urotropin in a case with benefit; but one day the patient complained of pain, burning, etc. Upon investigation he found he had taken the prescription to a different druggist, who dispensed another manufacturer's product. The powders were more woolly and less crystalline. Their discontinuance and the resumption of urotropin were followed by immediate relief.

In the *Münich, med. Wochenschr.*, Aug. 15, 1905, Dr. Goldberg writes that "Urotropin-Schering appears to be more effective than the hexamethylentetramin of other origin."

In the *Annales des maladies des organes genito-urinaires*, Oct. 1, 1905, Guiard says: "Many of the imitative products of urotropin are of doubtful value or are positively injurious."

In the *Critic and Guide*, March, 1906, Dr. W. J. Robinson, writing on "Proprietary Remedies, from the Physician's Standpoint," states:

"Urotropin was a distinctly new drug when introduced by its manufacturers, and they have rendered a real service to humanity. Why should they not derive the benefit? We all know the drug is chemically hexamethylentetramin, made official under the foolish name hexamethylenamina. I am not at all sure that every nondescript brand is as pure as urotropin, and the patient has to pay the same price."

Dr. Robinson points out that the patient does not get the drug any cheaper when hexamethylenamina is prescribed. The difference goes into the pocket of the druggist, who charges just as much for a prescription if its ingredients cost him 20c as he does if they cost him 30c, the main factor being his time and labor.

But for our efforts, urotropin would probably not be known to the profession in America, certainly not to the present wide extent. Hence it would, but for our work, very likely not be in the *Pharmacopœia*. In this connection we beg to quote the following passage from a communication by Prof. A. L. Benedict, published in this

month's "Medical Times":

"There is a point in ethics, from the side of the manufacturer, which we have not seen mentioned in the literature. When a reputable firm places before the profession a really valuable new article, either the result of costly experiment or simply as a matter of ordinary business enterprise, and it is imitated without improvement by other firms, it seems to us plain that the profit should accrue to the original producer and that competing firms should be frankly told that the benefits of trade do not belong to them."

This is a simple dictate of the sense of justice, and in no way "fosters a graft," as Mr. Schlotterbeck remarks.

Yours respectfully,

SCHERING & GLATZ.

New York, June 18, 1906.

Several physicians in Detroit having been imposed upon by the person mentioned, the following circular letter from Mr. Peter Sorensen, the Danish Vice-Consul for Michigan, has been issued:

Dr. John Hansen.

The Royal Danish Vice-Consul at Cleveland, Ohio, reports the above mentioned party to be an imposter.

While in Cleveland, Hansen represented himself as representing the Commune Hospital in Copenhagen, and visited many hospitals in Cleveland under this representation.

Reported as being well-dressed, evidently well educated, speaking German and French fluently, and English fairly.

At Cleveland he stated that while en route from Buffalo to Cleveland he had lost his satchel containing his credentials and letters of credit.

Letters from Hansen's mother and a superintendent in Buffalo show him to be an imposter, besides, he has admitted to the Vice-Consul at Cleveland that he has obtained assistance in Buffalo under false representations. Was arrested in Cleveland at the instance of the Vice-Consul, afterwards released at the instance of that official, and is supposed to be preparing to go to Toledo, Ohio, or Chicago.

#### Description.

Medium height, very slender, light hair, close cropped red beard, fine clear cut features, unusual forehead, age between 35-40.

Pittsburg, Pa., June 22, 1906.

Journal of Michigan State Medical Society,  
Detroit, Michigan.

Sirs:—The seventh annual meeting of the American Roentgen Ray Society will be held August 29-30-31, 1906, at the Cataract and International Hotels, Niagara Falls, N. Y.

A large and interesting program, containing the names of the best known X-ray workers in this country as well as a number from abroad, has been prepared. An interesting feature of the meeting will be the exhibit of prints and negatives. The railroads have granted a rate of a fare-and-a-third on the certificate plan.

The officers of the society are: President, Dr. Henry Hulst, Grand Rapids, Mich.; secretary, Dr. Geo. C. Johnston, Pittsburg, Pa.; treasurer, Dr. Leavitt E. Custer, Dayton, Ohio; vice-presidents, Dr. Russell H. Boggs, Pittsburg; Dr. Clarence E. Skinner, New Haven, Conn.; Dr. Ennion G. Williams, Richmond, Va.; Dr. Eugene W. Caldwell, New York, N. Y.

Full information regarding the meeting and application blanks for membership may be obtained by addressing,

GEORGE C. JOHNSTON, Sec'y.,  
Pittsburg, Pa.

Hillsdale, Mich., July 30, 1906.

Editor of the Journal:

Dear Sir:—I send you the enclosed letter to show you what may be done with a little effort to suppress quack advertising.

We have also started legal proceedings against a quack who comes to Hillsdale. He will be arrested on his next return.

Respectfully yours,

A. STRIEMER, M. D.

The letter above referred to is as follows:

Toronto, Canada, July 23rd, 1906.

Dr. A. Striemer, Esq., Hillsdale, Mich.:

Dear Sir and Brother:—I am in receipt of your favor of the 20th instant and beg to say in reply that the advertising matter of which you complain which appeared in the American edition of the *Forester* was inserted without my knowledge, consent or approval. Immediately upon my attention being called to it I notified the advertising manager that it must be discontinued, and I have his assurance that it shall be discontinued.

I am, Yours sincerely and fraternally,  
DR. ORONHYATEKHA, S. C. R.

## Progress of Medical Science

### MEDICINE.

Conducted by

T. B. COOLEY, M. D.

**The Clinical Significance of the Urinary Nitrogen**—EWING & WOLF present a very complete discussion of the possible clinical value of quantitative determinations of the various nitrogenous constituents of the urine, their main object being to show that determinations of single constituents, such as urea and uric acid, are of little or no value, because of the very great variations possible under normal conditions. The important thing, and the only one from which just conclusions can be drawn, is a complete picture of the nitrogen elimination, showing the amounts of the principal compounds, and their percentage relation to the total nitrogen. They consider at some length the sources of the various nitrogenous bodies of the urine, their physiologic and pathologic variations, and the clinical indications to be derived from them.

Urea and uric acid, varying both absolutely and relatively to the total nitrogen, almost directly with the amount of nitrogenous food ingested, have according to present views no especial clinical significance. Kreatin and kreatenin remain absolutely about the same on any diet. It is quite probable that determinations of these bodies will be of great value in showing the amount of endogenous nitrogen metabolism.

Ammonia varies little absolutely under normal conditions. It is increased by dyspnea and insufficient aeration of the blood; also somewhat by certain diets, such as milk. The most recent work casts doubt on the prevalent view that excess of ammonia nitrogen, together with acetone and certain aliphatic acids, is an evidence of acid intoxication. At present these compounds cannot be said to be an index or measure of auto-intoxication; but may, perhaps, be interpreted as a sign of danger. "Undetermined nitrogen" and animal acids are discussed at length, but no very definite conclusions drawn. It is interesting to find that the old lead acetate method for the detection of leucin was wholly unreliable, and that the crystals so often described in acute yellow atrophy, phosphorus poisoning, etc., were probably urates. Tyrosin has, however, been definitely demonstrated in various conditions; many other ammido occur in the urine, but have not as yet been well worked out. The authors present a table (after Folin) giving the normal relation of the various constituents for varying amounts of total nitrogen, decided departures from which they believe to indicate pathologic disturbances of metabolism. They think that careful urine examinations may show grave importance to attach to certain con-

ditions in which the symptoms are vague, the disorder expressing itself chiefly through the urine. The relative value of technical methods is discussed, and further papers are promised.—*Amer. Jour. Med Sci.*, May, 1906.

**Periodic Vomiting with Acetonemia in Children**—DICKINSON gives a comprehensive view of the literature of this interesting condition.

The clinical picture is that of the sudden onset of severe vomiting in a child previously apparently well, with no sign of gastrointestinal disturbance. The vomitus is clear and watery, and vomiting continues until the stomach is empty. There is no prevomiting nausea. The vomiting is repeated a varying number of times during the day, and the whole attack lasts usually from two to five days, but may last much longer. During the attack the child is prostrated. Constipation is the rule. There may be slight fever and the pulse is usually accelerated. The tongue is fairly clean. Gastric pain is absent or only present after repeated vomiting. Thirst is intense but drinking causes immediate vomiting. The appetite remains good. The attack ceases suddenly and health is almost immediately re-established, the child showing little sign of having undergone serious illness. Attacks recur at varying intervals, sometimes with marked regularity. The illness may last for years, disappearing with pregnancy. Acetone may be detected on the breath during the attack, and is always found in the urine if looked for daily.

Theories as to the cause are numerous. The most satisfactory is, that it is the effect of unknown toxic substances, caused by deranged metabolism, which accumulate in the organism until the limit of tolerance of the nervous system is reached, when the attack is suddenly produced. Diagnosis is not difficult and the principal conditions to be distinguished are persistent bilious vomiting and tubercular meningitis.

Prognosis is favorable. Death is rare, and usually due to complicating nephritis.

Treatment consists in laxatives, fresh air, exercise, and hydrotherapy. Morphine injections have been used for the vomiting. Alkalies combined with bromides have been used. Edsall and others have had good results from sodium bicarbonate (3 ounces in 24 hours). This is used as a specific on the theory that the disease is a severe acid intoxication.—*Brit. Jour. Child. Dis.*, Apr., 1906.



## SURGERY.

Conducted by

MAX BALLIN, M. D.

**Surgical Treatment of Gastric Ulcer.**—Internal treatment of gastric ulcer is, in 20 per cent of the cases, unsatisfactory, on account of recurrence of the ulcer and serious sequelae of the disease. The mortality from gastric ulcer under internal therapy is between 10 and 13 per cent. It is a matter of fact that many sufferers from gastric ulcers, not cured by internal treatment, are cured or improved by operation. Immediate mortality from operations for gastric ulcer is in recent years 8 to 10 per cent. The final results of these operations for gastric ulcer, collected from 101 cases, all operated upon by the author, are more gratifying, 61 per cent cured, 24 per cent very much improved. Gastric ulcer is considered cured if the ulcer proper has healed, and if the motory and secretory functions of the stomach are restored. The findings in this direction after operation are: dilated stomach returns to its normal size; hyperacidity returns to normal condition; free hydrochloric acid is nearly always present after operation, though usually in somewhat smaller quantity than before operation. If hypoauidity or absence of hydrochloric acid existed before operation, in many cases after operation the acid will be restored. Regurgitation of bile into the stomach after operation has no serious consequence and soon disappears.

**Choice of Operations.**—Gastro-enterostomy is the method of choice in the treatment of gastric ulcer. This operation gives the best conditions for healing of the ulcer and normal function of the stomach, by preventing stagnation of the contents of the stomach. The results of gastro-enterostomy are the best, if gastric ulcer is complicated by stricture of pylorus, adhesions between the stomach and adjacent organs, and dilatation of stomach. Also in hemorrhage, gastro-enterostomy has been effectual. Excision of the ulcer should be done only exceptionally because the ulcers are often multiple and even after opening the stomach, can only with the greatest difficulty be located and excised. Besides excision of the ulcer alone, often will not benefit the complications mentioned above.

Pyloroplasty and gastrolisis should not be performed. Resection of the pylorus is indicated, if the ulcer located at the pylorus arouses suspicion of carcinoma.

**Indication for Operation.**—A gastric ulcer should be operated, if internal treatment has been unsuccessfully tried, if the patient is disabled by pain, vomiting and dyspepsia, and if a stricture of the pylorus, atonic gastrolstasia or gastroptosis exists. Repeated small hemorrhages are indications for gastroenterostomy. In profuse hemorrhages, threatening the life of the patient, the risk of waiting seems to be less than immediate surgical interference. If operation is decided upon

in such cases—gastro-enterostomy is preferable to attempt of direct hemostasis. In simple gastric ulcer without complications, there is no indication for operating early.—Krönlein, *Archiv fuer klinische Chirurgie*, Vol. 79, Part 3.

**The Third Thousand Goitre Operations.**—On August 3rd, 1905, KOCHER of Berne, made his third thousandth operation for goitre. He gives the results of the third thousand, all of which were performed in the same clinic, between November, 1900, and August, 1905. Of the one thousand cases operated upon during this time seven cases died. Of these seven, three were cases of malignant tumor of the thyroid gland, one case of exophthalmic goitre and three operations for simple goitre, one of which was complicated by congenital myxödema, the second died from pneumonia and the third was complicated by double paralysis of the recurrent nerve, severe dyspnoea and myocarditis.

Classifying the different kinds of goitre, the several cases of death are distributed as follows: Of 904 operations for simple goitre three died; of 52 thyroidectomies for Graves's disease one died; of eight cases operated for strumitis none died, and of 36 cases operated for malignant diseases of the thyroid gland 3 died. KOCHER is therefore justified in considering operations for simple goitre a non-dangerous operation. Dangerous wound infection did not occur in any of these 1,000 cases and very rarely light local infection, stitch abscesses, etc. KOCHER lays great stress upon exact hemostasis; he introduces a drainage tube in every case, but usually removes it after 24 hours. Goitre operations are only dangerous if degenerative changes in the lungs, kidneys and especially in the heart are present. The heart should be thoroughly examined before an operation, as to dilatation, regularity and possibility of adaptation to a special strain. If the blood pressure is below 120 m. m. Hg. the operation should be considered as serious. In serious cases, general anesthetic should be avoided. The fact that only degeneration of the heart means a serious danger in operations for goitre, should be a strict indication for every physician to advise early operation, for his goitre patients, before secondary degeneration of the heart sets in. It is also without doubt that this so-called "goitre heart" (*Kropf Herz*) is often caused by injudicious use of iodine and thyroid extract. Also in exophthalmic goitre, operation should not be the last resort; it should be declined if insufficiency of the heart exists. In all operations on the thyroid, preservation of good functional glandular tissue should be the guidance for the method of operating.—*Archiv fuer klinische Chirurgie*, Vol. 97, Part 3.

## GYNECOLOGY AND OBSTETRICS.

Conducted by

REUBEN PETERSON, M. D.

**Some Clinical Observations on the Etiology of Salpingitis in Nulliparae.**—BANDLER says that salpingitis is inflammation of part or all of the Fallopian tube, and that it is possible for one tube to be involved without the other. Infection may enter the tube through the blood channel (tuberculosis) or the abdominal cavity (tuberculosis) or in an ascending infection from the cervix. The same variations in the degree of inflammation are to be noted in salpingitis as may be observed in appendicitis, and in some cases restoration to the normal or so nearly to the normal occurs as to leave no microscopic evidences. The cause of salpingitis in nulliparae where there has been no intrauterine manipulation, is in most cases a latent unrecognized gonorrhea. He cites a number of instances that have come under his notice, and says that numerous cases of pelvic pain, sterility, and ectopic gestation are the result of such cases of salpingitis. In conclusion he states that there have been many discussions as to the curability of this disease which have not yet been settled.—*Medical Record*, June 9, 1906.

**The Localization and Method of Growth of Myomata Uteri** is the subject of an interesting paper by KEIFFER. In the course of a piece of work on the uterine blood vessels, Keiffer came across several small fibroids in injected specimens. These, and others in other specimens, he has studied with particular attention directed to the relation of the fibroids to the blood vessels. He concludes that, from his specimens there is proof neither for nor against Cohnheim's theory. On the whole the preparations tend to show that, whether they arise from the action of some irritant brought thither by the blood or not, young myomata can take origin in very different parts of the uterus—in the muscle or fibrous tissue or from the wall of a blood vessel. In type they may be pure myomata, fibromyomata, and limited, encapsulated or diffuse, according (1) to their particular localization, (2) to their mode of growth, whether by the development of pure muscle or the inclusion at various times of part of the tissue forming the capsule, (3) to the degree of reaction in the muscular tissue of the capsule surrounding the primary nodule, and (4) to the

amount of reaction on the part of the vessels in the capsule. This latter point determines the condition of the capsule, whether it is highly vascular or so badly developed that there is no proper capsule, and the myoma is of the diffuse variety. In some of the sections there are shown myomata so developed that they actually enclose the blood-vessel in their center. The nutrition and growth of these tumors require the formation of new capillaries from the pre-existing vessels. This is easily seen in most of the preparations, and the great vascularity of those with a central vessel is remarkable. The vascularisation of myomata at an early stage seems of importance in determining their development or stagnation, their atrophy or secondary degeneration, their form and their migration to the surface of the uterus, independently of those other causes of growth inherent in the uterus, its functional activity, the sexual life and the general nutrition of the woman.—*La Gynecologie*, Feb., 1906.

**Myomectomy.**—In concluding an interesting article on myomectomy, HORROCKS says: "This is, I consider, the ideal operation whenever it is possible of performance. It is not possible in every case of fibroid, for some are so large a size that nothing but a thin shell of uterine tissue remains; for such hysterectomy must be performed.

The question of ligatures is a most important one and has much to do with the success of the operation. It is imperative that they shall be completely aseptic and absorbable. I believe that all bad results can be traced to silk sutures which, being permanent, offer a chance for infection.

The advantages of the operation are that it leaves the patient unmutated, with her reproductive organs intact, childbearing is possible, the change of life occurs naturally and in due course, and, in the meantime, the patient's life is happier, being free from the inconveniences and drawbacks of a too early menopause. So far as can be judged, the effects of the operation do not seem to render the course of any subsequent pregnancy and labor especially dangerous. I believe that the operation will on its merits be performed more and more frequently in the future, and every modern practitioner should therefore know of it and its usefulness."—*The Practitioner*, July, 1906.

## PHARMACOLOGY AND THERAPEUTICS

Conducted by

C. W. EDMUNDS, M. D.

**Mercurial Treatment per Rectum.**—AUDRY has tried the effects on 48 patients of administering mercury by the rectum and believes that the method is an excellent one. Over half of the cases are reported in detail and they seem to demonstrate that mercury is not only tolerated by the rectum, but also that it is readily absorbed and is as effectual as when given in other ways.

The form of administration is in suppositories, the basis of which is cocoa butter; the metallic mercury is a liquid preparation in olive oil and vaseline, which admixes perfectly with the cocoa butter; each suppository contains 2 cm. of mercury. One such suppository is given every evening for a month, when they are discontinued for a few days, to be later resumed.

Control cases were used for comparison and it was found that the rectal administration compared most favorably. It was particularly effectual in lesions of the anal, genital and buccal regions.—*Ann. de Derm. et d' Syph.*, VII., No. 3.

**Treatment of Chronic Diseases of the Heart by the Nauheim Methods: Its Indications and Contraindications.**—KINNICUTT gives the chief constituents of the Nauheim springs as chloride of sodium, chloride of calcium, and carbonic acid gas, free and in combination. As the baths vary in their different constituents they are known as the ordinary brine bath, the thermal brine bath, the thermal effervescent bath, the effervescent bath, the current thermal brine bath, and current effervescent bath. The course of baths usually begins with the brine or the thermal brine bath, strengthened after a short time by the addition of gradually increasing quantities of motherlye. The Schott resistance exercises are used in connection with the baths. The most brilliant successes in the writer's experience are obtained in cases of enfeebled, relaxed, dilated hearts, with or without a murmur, of muscular or relative mitral incompetence following prolonged and exhausting diseases, the various acute infectious diseases, and also associated with anemia of varied causation.—*Medical Record*, May 19, 1906.

**The Problem of the Synthetic Compound.**—STIEGLITZ states that the problem of the enormous increase of the new synthetics is one of the most serious before the profession. Admitting the commercial or mercenary reasons for their production,

he holds that there is a service to be done to humanity and a rational, legitimate ideal to be attained. While the progress has been comparatively slight, consisting for the most part in the production of a few more or less useful antipyretics, some hypnotics, some modifications of alkaloids, and a few more advanced preparations, the chemical successes in other lines, such as in the manufacture of the anilin dyes, teaches a lesson of patience and of hope for the future. The problem is a complex and important one, but he does not see why we should not even attain to the chemical preparation of those specific antitoxins which we now draw from animals, at some time in the future. The main point of his remarks, however, is that there is need of some scientific standard or measure for the impartial sifting of the good from the bad in these synthetics, of some institution, perhaps international, or some central bureau of critical disinterested review.

The need of a check on the great manufacturing houses is illustrated by him by quotations of deceptive chemical nomenclature, though technically truthful, covering what are practically mixtures as rank as any of those recently exposed by the Council on Pharmacy and Chemistry of the American Medical Association. Physicians should insist, he thinks, that all chemical compounds whatever should pass before some reviewing board which will insist that the manufacturers give the truth, the plain truth and nothing but the truth.—*Jour. A. M. A.*, May 5, 1906.

**Acetanilid Poisoning from Bromo-Seltzer.**—BLACKBURN reports a case of typical acetanilid poisoning from the use of bromo-seltzer, the patient having taken as much as ten or twelve bottles a week. There was no difficulty in the discontinuance of the drug, the patient making no attempt to continue the habit. The other treatment consisted in the use of cardiac stimulants and regulation of the bowels. Blackburn points out that bromo-seltzer admittedly contains four and a half grains of acetanilid to the heaping teaspoonful, and, as shown in *The Journal A. M. A.*, February 10, p. 454, about three grains to the average teaspoonful, or twelve or fifteen grains to the tablespoonful. As many persons take the latter quantity repeatedly, the danger is sufficiently evident.—*Jour. A. M. A.*, June 9, 1906.



## PATHOLOGY AND BACTERIOLOGY

Conducted by

A. P. OHLMACHER, M. D.

**The Differentiation of the Streptococci.**—BAUMANN concerns himself with the problem of variation in the different streptococci from human sources. This is still a mooted point in bacteriology and no certain method of differentiating pathogenic and non-pathogenic strains has been devised. By the use of blood agar as a medium and observations directed to the presence of the resorption or colorless halo about the colonies on blood agar plates marking the hemolysis, Schottmüller believed a certain method of identifying pathogenic streptococci had been discovered. In attempting to verify this contention, BAUMANN studied streptococci from various affections in human beings and compared them with streptococci isolated from human saliva, feces, and from cow's milk. He concludes:

1. On Schottmüller's blood agar only definitely pathogenic streptococci of the type *S. longus* or *erysipelatos* produce the characteristic resorption halo, while those isolated from saliva, feces, and milk induce no well-defined hemolysis in this medium.

2. Some of the non-hemolytic strains produce a green coloration on blood agar; but this property varies.

3. In bouillon cultures a pronounced hemolytic effect is determined for the pathogenic streptococci, while for the non-pathogenic strains it is slight or absent.

4. Hemolysin appears in the bouillon cultures in twenty-four hours reaching its maximum density after one to two days, and ordinarily disappearing after 7 to 9 days, though occasionally persisting 14 to 20 days.

5. For differentiating streptococci the cultivation on blood agar is superior to the hemolytic test in bouillon cultures.

6. No variation occurs in the different races of streptococci in their fermentative action on sugars (glucose, milk and cane sugars).

7. In Barsiekow's medium and also in litmus milk no growth of the streptococci is to be observed.—*Munch. med. Wochenschr.*, No. 25, Jahrg., 53, 1906.

**Experimental Suprarenal Glycosuria.**—Since its discovery in 1901, it has repeatedly been verified that subcutaneous or intravenous injections of a suprarenal extract possess the property of exciting glycosuria in dogs or rabbits. This subject is further studied by VELICH, who employs frogs and whose experiments yield the following results:

Intraabdominal or subcutaneous injection of suprarenal extract into well nourished frogs excites a glycosuria to be detected within the first hour.

Contrary to the views of Herter and Wackerman this suprarenal-glycosuria has no relation to the action of the extract on the pancreas. In pancreatectomized frogs, the glycosuria can be detected in the first hour after intraabdominal injection of suprarenal extract, while the glycosuria

primarily associated with extirpation of the pancreas first appears from the second to the fifth day.

The extirpation of the spleen, intestine, testicles and ovaries does not inhibit suprarenal-glycosuria.

Therefore the excretion of sugar in the urine after injection of suprarenal extract is dependent on the nutritive status and on the liver, that is on the glycogen reserve in the liver. This glycogen reserve is renewed in fasting frogs at the expense of the fat bodies.

Glycosuria is induced by repeated injections of suprarenal extract so long as the fat bodies are preserved, although cognizance must be taken of the increased tolerance of the organism to the glycogen expelling effect of suprarenal extract.—*Virchow's Archiv.* Bd. 184, Heft 3, 1906.

**Contributions to the Etiology of Cerebrospinal Meningitis.**—Opportunity to investigate certain aspects of the question relating to the transmission of cerebrospinal meningitis was grasped by DIEUDONNE on the occasion of a recent outbreak of this disease in a Bavarian garrison. In general this report confirms the published observations of other recent authorities as to the finding of the specific organism (the meningococcus of Weichselbaum) with regularity in the fluid of lumbar puncture, and less constantly in the nasal secretion and the blood of the affected patients. The cultural characteristics of the isolated meningococci correspond to the usual descriptions. Agglutination tests with a special serum gave positive results in a dilution as high as 1 to 400. The particularly important part of the work is that bearing on the presence of typical meningococci (carefully differentiated by cultural methods from the closely allied *Micrococcus catarrhalis* of Pfeiffer) in the nasal mucus of certain comrades in the same room in which several cases of meningitis had developed. Among 39 men thus exposed at least 5 positively showed meningococci, and 3 probably were similarly affected. In a number of soldiers not in contact with or exposed to meningitis only the *Micrococcus catarrhalis* could be detected. None of the individuals whose secretions contained meningococci developed meningitis, though one suffered a transient attack of headache and vomiting. They were isolated and not discharged until the suspicious organisms had disappeared from their secretions. In endeavoring to hasten the destruction of the cocci antiseptic douches and powders were found of no avail. Very properly, DIEUDONNE emphasizes the danger of contagion from these apparently healthy bearers of the meningococcus, particularly through the means of the mucoid spray ejected in the act of coughing or sneezing. As to the dried secretion, the danger is apparently not great since the meningococcus quickly perishes after drying, but the coarser particles of mucus raised in dust by unusual commotion might carry the infection.—*Centralbl. f. Bakteriologie*, Bd. XXXI, Heft 4, 1906.

## PEDIATRICS.

Conducted by

R. S. ROWLAND, M. D.

**Periodic Vomiting With Acetonemia in Children.**—DICKINSON thinks this condition has not received as much attention as it ought.

After a careful consideration of all of the numerous views in regard to the etiology, he concludes that the disease seems to be the effect of some toxic substance, the product, as yet unknown, of a defective metabolism, which accumulates in the tissues, and which, acting on an unstable nervous system whose limit of tolerance is reached, suddenly produces an attack.

He thinks that the diagnosis is not difficult, if we bear in mind the symptoms; the sudden onset, the vomiting, without nausea, resembling the regurgitation of cerebral affections, the appetite preserved in spite of the general condition, and the smell of acetone in the breath and its presence in the urine.

The two chief conditions likely to give rise to difficulty are repeated bilious vomiting and tuberculous meningitis. The diagnosis from the former is thus given: In bilious vomiting there is a history of error in diet, action of the bowels is followed by relief, tongue coated, abdomen distended, abdominal colicky pains with increased peristalsis, clay colored stools and febrile urine; whereas in periodic vomiting there is no sign of previous indigestion or history of unsuitable diet, action of the bowels gives no relief, the tongue may be clean, the abdomen either normal or retracted, there is no colicky pain and no increased peristalsis, the stools are normal, and the urine contains acetone.

With regard to tuberculous meningitis, attention is called to the following points: In periodic vomiting the illness commences suddenly; in tuberculous meningitis, on the other hand, there is usually a prodromal stage. The vomiting is obstinately persistent in the former case, but is present only at the beginning of tuberculous meningitis and ceases during its course. The intelligence is always preserved in periodic vomiting, while in meningitis a subcomatose condition soon supervenes. In those rare cases of tuberculous meningitis where the special nervous symptoms, such as rigidity and Kernig's sign are absent, lumbar puncture might be resorted to settle the diagnosis.

The prognosis is almost always favorable. DICKINSON says treatment has the double object of cutting short the attack and of preventing its recurrence. The only specific treatment founded on a conception of the pathology of the affection is that of Edsall, who considers it due to acid intoxication. He gives a diffusible alkali such as bicarbonate of soda in large doses, 15 grains every two hours or 3 ounces in twenty-four hours. This treatment seems to have been successful in other hands, combined with sodium bromide. In cer-

tain cases, injections of morphine have proved beneficial in allaying the vomiting.—*The British Journal of Children's Diseases*, March, 1906, page 87.

**Some Surgical Consideration of Meckel's Diverticulum.**—CLOGGS, in an extended review of this subject, finds that Meckel's diverticulum occurs in about 2 per cent of all bodies; that it nearly always arises from the lower ileum, although it has been found located anywhere from the pylorus to the ileo-colic valve.

Excluding band-obstruction, the surgical consideration may be classified as follows, under five heads: (1) Persistence of the tube in whole or in part, its lumen opening at the umbilicus. (2) Inflammation. (3) Volvulus. (4) Intussusception. (5) Hernia of diverticulum.

(1) Persistence of the tube is not very frequent. The subjects are predominantly males. The prognosis as regards life is good. The infants thrive and the small amount of intestinal contents escaping at the umbilicus does not affect them materially. Spontaneous healing occasionally occurs. Simple measures like freshening the edges are sometimes sufficient to effect a cure. When a fistula is present, and most certainly where this communicates with the intestines, such practice is dangerous and ought to be condemned. Radical operation, excision of the diverticulum and closure of the intestine, should be performed here.

(2) Inflammation of the diverticulum is not very common. The author reports two cases in girls, one 13 years, the other aged 11½ years. Both cases were considered to be suppurative appendicitis before operation. CLOGGS states that the etiology and pathology are in many respects similar to that of appendicitis and, as is to be expected, most cases are given that diagnosis. In no case on record has a correct interpretation of the condition been made before operation. The tumefaction formed by diverticulitis is situated more towards the median line than is usual in appendicitis.

(3) Volvulus of the diverticulum is a very rare occurrence.

(4) Intussusception is rare but perhaps slightly more frequent than volvulus.

(5) Hernia of the diverticulum.—Occasionally the diverticulum is found in a congenital umbilical hernia. It may be ligated in the cord. It has also been found in the inguinal sac but not in a child in any other sac.—*The British Journal of Children's Diseases*, February, 1906, p. 41.



## DERMATOLOGY AND SYPHILIS

Conducted by

A. P. BIDDLE, M. D.

**The Cause of Baldness.**—The relationship between seborrhoea and calvities has been almost universally acknowledged, and the pernicious activity of various microbes commonly admitted as a sufficient cause of both conditions. Even grayness of the hair is alleged by Metchnikoff to be due to a pigment devouring microorganism. A new explanation for baldness, however, has been given by JACQUET, who reviews the subject carefully and arrives at the conclusion that the trouble has in most cases at least, a nervous origin.

He calls attention to the fact that the condition is more common among intellectual persons than among others. He is convinced that baldness is of frequent occurrence, not only among those who are intellectual, but also among those who are not subjected to intense mental strain, and under such circumstances it might occur comparatively early. Baldness increases with civilization, and BROcq has noticed the curious fact that since women have devoted themselves to intellectual pursuits, and have grown accustomed to employ their cerebral center in a more intense manner, baldness, which formerly was rare among them, has progressively become more frequent.

Furthermore, JACQUET has found in several cases of early baldness that there is a degenerative inflammation of the nerves of the scalp. He concludes that the functional excitation of the higher nerve centers in the struggle with the environment at first caused an increased growth of the hair. Subsequently, in the evolution of the race or of the individual, there came a period of functional exhaustion. This is held to be in accordance with the law that excitation at first creates increased vigor of a function, then of its organ; similarly, excess of irritation causes functional disturbance and, if continued, lesion of the organ.—Editorial, *New York Medical Journal*, June 16, 1906.

**Trypsin in Malignant Growths.**—PUSEY reports its use (Fairchild's sterilized trypsin) in severe cases of inoperable carcinoma in different parts of the body and in one inoperable round-cell sarcoma of the thigh (following the experiments of Beard of Edinburgh): all except one were hopeless from the standpoint of operation or the use of the Roentgen rays. He began with injections of from 5 to 10 drops daily, and in some cases rapidly increased it to a maximum dose of 60 drops daily.

Sometimes the doses—whether small or large—caused little pain and no subsequent irritation at the site of injection; in one or two patients there was bitter complaint occasionally after an injection; frequent inflammatory swellings resulted, and in six or eight instances abscesses developed

at the site of injection. The abscesses which formed began as ordinary phlegmonous swellings. When they opened there was a discharge of a thick, sticky, almost transparent serous fluid containing broken-down cheesy masses. After evacuation of an abscess there was left an unhealthy sinus with dirty-grayish, flabby walls, and in three or four instances these enlarged until they formed unhealthy, deep, indolent sinuses of the diameter of a finger or longer. These are slow to heal, but are painless.

In one case, a circumscribed mass of carcinoma in the pectoral muscles on the front of shoulder positive benefit was obtained; but in all the others appreciable harm, the patients seeming to fail more rapidly than before; and in these there has been no appreciable influence on the neoplasms.—*Jour. A. M. A.*, June 9, 1906.

**The Dissemination of Smallpox.**—The more thorough our knowledge of the acute infectious diseases becomes, the more restricted is the number of diseases which are considered to be due to air-borne contagium. The dissemination of diphtheria is no longer ascribed to infection through the air, and malarial disease and yellow fever are now known to be disseminated by the bite of an infected mosquito. Smallpox is one of the serious infectious diseases the extension of which still baffles us. It is believed by many observers that the contagium of this disorder is transmitted through the air and by fomites. If a certain microorganism proves to be the cause of the disease, it is quite likely that we shall at some time abandon our present notion of an air borne contagium. The experiments of BRINCKERHOFF and TYZZER have shown that smallpox fomites have no power to convey that disease to monkeys. It is true that the disease produced in monkeys by the inoculation of smallpox virus differs from variola vera in man; but is it not possible that an inoculation of monkeys in the natural way, that is, in the same manner that man is infected, might produce variola vera? Is it not possible that the cytoryctes, assuming, for the sake of argument, that that organism is the cause of the disease, may be conveyed from patient to patient, by the bite of an insect? Against this possibility is the fact that smallpox appears to spread in cold weather, when insects are not active. However, epidemics of smallpox often begin in the autumn, at a time when malarial infection is particularly virulent. Further, the fact that the *Cytoryctes variolae* is a protozoan parasite, like the parasite of malaria, may point to an analogy in the method of transmission.—Editorial, *New York Medical Journal*, June 16, 1906.



## OTOLOGY.

Conducted by

EMIL AMBERG, M. D.

**Treatment of Suppurative Middle Ear Diseases by Biers Congestive Hyperemia.**—In regard to the treatment of mastoiditis, FLEISCHMANN says the experiences made the new method appear dangerous in otology. The danger consists in the fact that the right moment for interference may be missed. There may be only insignificant outer changes and yet we find very advanced destruction of the bone. How much more difficult will it be to judge about the case when also these symptoms are disguised by the treatment by congestive hyperemia? The congestive hyperemia takes away the acuity of the picture, it makes a latent form out of the manifest form and lures us into hesitation, which can become of evil consequences for the patient. We may consider that the mistake is by far a greater one to miss the right moment than to perform an operation, another time, when it is superfluous. It cannot be denied that many cases of mastoiditis can be cured by the congestive hyperemia, but we do not know of what nature these are. It is certain that not all cases of mastoiditis can be cured by congestive hyperemia, and so long as we do not know which cases are the proper ones for the method, and so long as we do not know how long an operation may be postponed, we must expect bad results as well as good results from that treatment.—*Monat. f. Ohren h.*, May, 1906.

**Diseases of the Cavity After Radical Operation on the Ear.**—IWANOFF, describes three cases of diseased walls of the cavity after operation. In one case there was a cyst-like protrusion about one year after the final cure of the disease process. In the two other cases there was a typical cholesteatoma, in one after three years and in one after one year after completed epidermization. Besides, in one of the latter cases there was a mycosis of the cavity. All three cases have in common that the disease process took place below the layer of the epidermis and with participation of the epithelium, so that these affections can be explained as consequences of irregular epidermization of the cavity.—*Arch. f. Ohrenh.*, May, 1906.

**Disturbances of the Sensation of Taste in Chronic Middle Ear Suppuration, Especially After Surgical Interference.**—Some of the conclusions to which KANDER comes are, that the

chorda tympani is frequently diseased in chronic middle ear suppuration. The chorda may, however, be completely preserved or only little changed in spite of serious affection in its surroundings, so that we cannot draw any conclusion from the presence of the sensation of taste at the distal end of the chorda in regard to the gravity and extent of the affection of the middle ear. The chorda tympani is always torn when hammer and anvil are extracted. The subjective sensation of taste on the tongue, after surgical procedures are in all probability caused by irritation of the central portion of the chorda.—*Ibid.*, May, 1906.

**Circulatory Disturbances Following Ligation of the Internal Jugular Vein in Sinus Thrombosis.**—The post mortem findings in the rapidly fatal cases following ligation for conditions outside the skull are general edema of the brain, with hemorrhages and later softenings, while in the very few cases in which the jugulars themselves were investigated the ligated one was found to be of large size, with a small one on the opposite side. Hemorrhages into the brain and edema have been frequently observed in fatal cases of sinus thrombosis. EAGLETON asks whether it is not possible that in some of these, death was in reality due to obstruction of the venous return, the size of the vessels escaping notice. He thinks it is fair to infer that in all cases of sinus thrombosis the presence of optic neuritis should warn us that the return venous flow is already seriously obstructed, and cause us to be exceedingly careful to add as little further obstruction as possible by our surgical manipulations.

EAGLETON advises to first make as large an opening as possible in the sinus wall and to begin this opening far down toward the bulb, without attempting to remove the clot, in order to avoid the possibility of mistaking a parietal for an occluding thrombus, and reducing to a minimum the probability of disseminating the thrombus. Second, if the thrombus is so low as in the cases reported that this is impossible, he advises the application of a temporary clamp (Crile Clamp) and if now there is no extra bleeding from the diploic and other small veins, it is fair to infer that the circulation has in no way been disturbed; third, by not injuring the external jugular; fourth, by ligating above the entrance of the facial whenever there is not a positive indication for a lower site being chosen.—*Arch. of Otology*, April, 1906.

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## Original Articles

### CESAREAN SECTION FOR PLACENTA PREVIA CENTRALIS.—REPORT OF A CASE\*

J. G. LYND, M. D.,  
Ann Arbor.

The Cesarean operation for placenta previa has for a number of years past been a frequent subject of discussion and, as a routine treatment for this condition, generally condemned, while some go so far as to say that it is never justifiable. Yet a considerable number of surgeons and obstetricians maintain that there is at least one variety of placenta previa, viz.—placenta previa centralis with a normally developed placenta—together with certain other conditions, such as rigid os and deformities which make version a more than usually dangerous operation, where Cesarean section is demanded. Some, however, condemn the operation as entirely unjustifiable as, for example, Murray, who read a paper before the American Gynaecological Society in 1902, at which time

his opinions were generally concurred in by the members of that society.

In September, 1904, Holmes read a paper before the Chicago Gynaecological Society entitled "Cesarean Section for Placenta Previa, an Unjustifiable Procedure," and, while some of the members thought there might be exceptional cases where it would perhaps be justifiable, the society in general supported the views expressed. Cameron, in the *British Medical Journal*, is quoted as saying, "Operators who advise Cesarean section for placenta previa are surgeons of little or no experience in obstetric practice; a skilled obstetrician would never think of such a procedure."

Not all authorities hold these extreme opinions, however. Truesdale (*Boston Medical and Surgical Journal*) believes Cesarean section to be the best treatment for complete or partial placenta previa, when the child is viable and the

\*Read before the Section on Gynecology and Obstetrics, at the Jackson meeting of the Michigan State Medical Society and approved for publication by the Publication Committee.

diameters of the pelvis or conditions of the soft parts render the operation of dilatation and version (with sufficient rapidity to save the child) a dangerous procedure for the mother.

Donovan, in *American Gynaecology and Pediatrics*, is still more liberal. He gives the following indications for Cesarean section in placenta previa when the pregnancy has reached twenty-eight weeks or over:

1. Complete previa.
2. Previa in primipara, in presence of severe hemorrhage.
3. When there is a history of previous operative delivery.
4. It should be considered in all cases where version is indicated, if a reasonably skilled surgeon is available and only an ordinary obstetrician.

A short review of the varieties and conditions which may be present, of the ordinary treatment, the difficulties, dangers, and fatality of such treatment, will, I believe, be profitable and I therefore touch upon them briefly.

**Classification.**—Placenta previa is divided into two general classes, the incomplete and the complete. These again are subdivided: the incomplete into lateral and marginal. In the lateral, the edge of the placenta comes down to the cervical canal and may project into it when dilated. When the edge projects over the internal os, it is termed marginal.

The complete is also subdivided into central and partial. In the first the center of the placenta lies over the internal os. In the second the greater mass of the placenta lies upon one side of the lower uterine segment but projects over

the internal os farther than the marginal variety.

A normal placenta is round or oval, thick at the center, gradually thinning out to the edge, the cord attached at the center. In the central variety, mentioned previously, this would bring the cord attachment directly over the internal os.

**Frequency.**—Placenta previa is said to occur about once in 1,200 pregnancies, but it is probable that, if it were possible to ascertain all the cases, it would be found to be much more frequent. Many cases are thrown off early and the condition undoubtedly is the cause of many early abortions.

What the proportion of the different varieties is, it is difficult to estimate, but in order of frequency the lateral take first place, the marginal second, the partial third, and the central is the most rare of all. In 270 cases observed by Winckel, 217 were lateral and marginal and 53 partial and central.

**Fatality.**—Hirst states that the maternal death-rate in general has been about 40 per cent, but in expert hands with proper surroundings this is greatly diminished. He also says a fetal mortality of 50 per cent or over must be expected.

This includes all classes of cases and since the more nearly central the greater the danger to both fetus and mother, it gives little chance to either when the attachment is central or nearly so, even in expert hands. The loss of blood is enormous. Version often results in laceration of the cervix through the placental site which is usually fatal. Should the mother escape death from hemorrhage, she runs great chances of infec-



tion in her weakened and unresisting condition.

**Diagnosis.**—Hemorrhage during the later months of pregnancy is considered almost diagnostic of the condition. It is not always so, however, as we occasionally have quite profuse hemorrhage with normally attached placenta. It should be considered so, however, until proven otherwise. Recently I had a case sent to my private hospital, having profuse hemorrhage. The physician who saw her said she passed at least a quart of blood. There was no amniotic or other fluid with it as the membranes were unruptured and the blood formed a firm clot. The flowing ceased soon after she reached the hospital and she went a week before labor began. During this week she had one slight hemorrhage, when she flowed about one-half pint. There was no placenta within reach of the finger. The head could be clearly felt through the uterine wall outside the cervix. There was no hemorrhage during labor, which came on spontaneously and, as the membranes came away whole with only the one rent in them through which the child passed, it was easy to locate where the placenta had been attached, which was just below the fundus. The child was alive, strong, and well, and there was nothing to indicate that any hemorrhage had taken place, nor was there any cause apparent.

If a placenta be attached below the child, a digital examination should reveal the fact whether the patient has or has not had hemorrhage. When the finger can be passed through the cervix placental tissue should be recognized. Examined through the vaginal vault and uterine wall, the inability to clearly feel

fetal parts should excite suspicion. It may be difficult or impossible to differentiate between a secondary placenta occupying this position or a membranous placenta, but these must be considered and treated the same as placenta previa, therefore to differentiate is not essential. To differentiate between the varieties may not always be easy, yet a diagnosis between the complete and incomplete can generally be made with comparative ease by feeling the fetal parts through the vaginal vault and the uterine wall. Through the thick part of the placenta they can not be felt at all, through the thin portion, indistinctly, while through the vagina and uterus they can usually be felt distinctly. A suture or fontanelle can generally be felt, if a head presents or some other recognized parts in other presentations. Recognition of a part is not necessary, however; it is rather the distinctness with which some part is felt showing the absence of the thick, soft, spongy placenta.

**Treatment.**—The indication is, if hemorrhage be present, to control it, dilate the canal and deliver. I believe it good treatment to empty the uterus at any stage of pregnancy, once placenta previa is diagnosed; whether hemorrhage has occurred or not and whether or not the child is viable. There is no excuse for delay, once the condition is known to exist, as delay means added risk for the mother. The indications are best met by applying pressure to the bleeding surfaces, using some part of the fetus when possible for the purpose, using the forceps or doing version as conditions indicate.

When the attachment is central or nearly so, however, this is not practical,

as it is necessary to separate a large portion of placenta or perforate it in order to do so. Here, when hemorrhage is alarming, a firm vaginal tampon will best meet the indication for the time being. The hemorrhage may be thus controlled until the cervix dilates and the placenta separates so the membranes may be reached and thus delivery be completed, or after the bleeding has been controlled for some hours, the placenta may be perforated with greater safety. A mortality of nearly 100 per cent of the children and of a majority of the mothers must be expected in such cases with this treatment even in expert hands. It is fortunate that such cases are very rarely met with. The only one it has been my misfortune to see is one I wish to now report.

On January 14th, of the present year, I received a telephone message about four o'clock in the morning, asking me to come to Battle Creek to see a case of placenta previa. Dr. Gorsline, who telephoned me, thought a Cesarean section might be advisable and asked me to come prepared to do such an operation, should I deem it necessary. Having dealt with many cases of placenta previa in the past, and never having seen one where such operation could be given serious consideration, though I went prepared, I had little confidence that it would be done. Arriving at 10 A. M. I obtained the following history and found the conditions described:

Mrs. N., aged 32 years, married four years.

History from puberty, which occurred at twelve years, to time of marriage, negative except for a mild form of dysmenorrhea. Pregnant once before, delivery occurring fifteen months ago, when placenta previa was present. Marginal variety, the edge overlapping the internal os about one

inch. She was delivered by Doctors Gorsline and Lamoreaux in the usual manner, viz., by rupturing the membranes, turning down the placental edge and using the fetus for a tampon. The child was born dead and the mother suffered great loss of blood, which left her weak and anemic for a considerable time, otherwise she made a good recovery.

Patient in the hands of same physicians this time as previously. They were called the preceding evening, when they found the patient having slight showing, the first that had occurred. The flow was so slight that had it not been for the patient's previous experience only fifteen months before, nothing would have been thought of it. As it was, it was decided to wait. At 3 a. m. she had a mild hemorrhage. Examination gave evidence of a placenta previa centrally attached. The parts were high up, no fetus could be felt from below. Placental tissue could be felt covering the internal os and a soft boggy mass over the entire lower segment of the uterus. At this time the vagina was tamponed, the patient sent to the hospital, and prepared for operation.

I found the patient in very good general condition, pregnant as nearly as could be calculated a little over seven months. There had been no great loss of blood, thanks to the prompt action of her physicians. The child seemed to be fairly well developed and in good condition. The abdomen had been prepared for operation, the vagina still contained the tampon, placed there seven hours before. Both parents were very anxious to save the child, if consistent with saving the life of the mother.

I made all possible preparation for delivery through the natural passages and also through the abdomen. Had her placed upon the operating table, the anesthetizer ready to begin. I then removed the tampon, washed out the clots, filling the vaginal vault, and cleansed the vagina, very little bleeding taking place. Upon examination now I found the parts high up, the external os soft and dilated sufficiently to admit the examining finger easily, where it came in contact with placental tissue. Passing the finger around the vaginal vault outside the cervix, nothing could be felt except a soft boggy mass, no fetal parts could be felt through it, and at no place could a thin portion corresponding to a placental edge be felt.

Through the abdomen the fetus could easily be made out lying high above the pelvic brim, head down, back anterior; nothing corresponding

to a placenta could at any point be made out. My diagnosis was central or very nearly central attachment of placenta, fetus viable, seven to eight months advanced and in good condition, conditions such as to make the prognosis very grave for both child and mother, should delivery be attempted by the natural passage, whereas, in my opinion, Cesarean section was favorable for both; consequently this operation was elected. My examination having started up quite profuse hemorrhage, no time was lost in anesthetizing the patient and opening the abdomen. Considering the contents of the uterus sterile and therefore harmless in the peritoneal cavity, should any escape there, I made an incision only about four inches long, dammed off the cavity as well as possible, cut directly through the uterine wall and membranes, grasped the child by the leg and delivered it. No clamps or any form of constriction of broad ligaments or cervix was used. The uterus contracted down immediately, the child was delivered, and very little bleeding occurred from the incision. The placenta filled the lower third of the uterine cavity and was as perfectly central as possible, a large thick normally shaped placenta, the cord attached directly over the internal os. The child began to cry immediately after it was delivered, so the cord was clamped, cut, and it was handed to the nurse, who was awaiting it.

The placenta and membranes were easily separated and delivered through the abdomen, the uterus contracting down so there was practically no hemorrhage. The patient did not lose one-fourth as much blood by the operation as she did during my vaginal examination and there was no unusual flow following it. Altogether she did not lose more than the average confinement case.

I sutured the incision in the uterus with chromicized catgut, first suturing the endometrium with a running suture, then through and through sutures and a layer of Lembert sutures over these. The incision in the abdomen was closed in the usual manner. The operation was a short one, delivery of the child not taking over five minutes. There was practically no shock. She began to nurse the baby on the third day and for two weeks her progress was as uneventful as an ordinary confinement. She was allowed to be up at the end of two weeks, not by my permission, however; was down stairs on the eighteenth day, and on the same day was taken with pain in leg and chest. Pneumonia and phlegmasia developed and she was very sick for some time, far more sick than after the operation. She finally recov-

ered, however, and is now in remarkably good condition, considering the late complications. The baby also is well and thriving.

This case, to my mind, illustrates a class of cases of placenta previa where the only proper treatment is by Cesarean section. Fortunately they are not common and surroundings and circumstances may render such treatment inadvisable, or if done, unsuccessful; yet I believe it offers more and better chances than any other. In the incomplete variety, where version or forceps can be used, I should say they are preferable, but even here sometimes it might save lives. If there is any question as to the occurrence of placenta centralis, and some men of wide experience have questioned it, expressing the opinion that the condition at full term or near it, is impossible, this case seen by Doctors Gorsline and Lamoreaux, and myself, should settle not only its possibility as late as seven and one-half months, but its occasional occurrence, for viewed from above as we viewed it, there was no possible chance for mistake.

The case is unique, I believe, in the fact of placenta previa occurring in two consecutive pregnancies and inside of 15 months, the only times she had ever been pregnant. No cause for the condition could be discovered in the uterus or surrounding parts. The results were no better than should be obtained in any such case taken in time. In fact not so good for the complications of pneumonia and phlegmasia which undoubtedly were embolic in origin would occur only occasionally and would be as likely to occur after an instrumental delivery as after such an operation.



## DISCUSSION.

**C. S. Gorslein**, Battle Creek: I think that Dr. Lynds has given the case very fully indeed. I would have been caught napping, had I not had a serious condition with the same women 15 months before with only a marginal position, losing the baby and nearly the mother. The pneumonia and phlegmasia were undoubtedly embolic in origin. Had both legs affected. The patient getting up when she did was entirely through a misunderstanding on her part.

As soon as pregnancy was diagnosed a third time, I believe one would be justified in emptying the uterus to avoid a repetition of the previous conditions.

**E. T. Abrams**, Dollar Bay: I do not believe anyone would be justified in bringing on an abortion just because the patient had had two, three or five abnormal implantations. I think, however, that emptying the uterus is justified when you know that you have a placenta previa.

**J. H. Carstens**, Detroit: I believe, with Dr. Abrams, that placenta previa in a previous case does not justify the emptying of the uterus. The uterus should not be emptied unless placenta previa is recognized. Wait until you have the trouble and handle it as it comes along. I think it is the consensus of opinion that Cesarean section is not to be preferred in placenta previa as a rule, but only in the rare cases. It seems to me that ordinarily we get along all right with the ordinary treatment. Tampon and watch, and then do a version. I think the mortality is not very high. Once in a while Cesarean section is justifiable. In general, opinion is opposed to it. I think the general practitioner would prefer version. The trouble with the statistics in the children is that they are premature, being mostly in the fifth or sixth month, and rarely at term. The children are not viable. The maternal mortality is great owing to the danger of infection in handling the raw surface of the uterus where the placenta has been removed. This is lessened where you have strict asepsis.

**Rolland Paræter**, Detroit: It seems to me that this case reported by Dr. Lynds would have

been a very valuable one for vaginal Cesarean section, as advised by Bumh. I would like to have other opinions on this.

**Dr. Lynds**: As to what should be done in regard to the case I reported becoming pregnant, I don't think you could do anything unless it was proven that a similar condition existed. This could be done before she was in any great danger. If she becomes pregnant she will be anxious to put herself under the care of a physician.

In regard to vaginal Cesarean section in such a case, I would say that it is just to avoid meddling with the parts, that you go through the abdomen. I do not see as there would be anything gained over delivering through a hole in the placenta. Experience has shown that a laceration through the cervix gives a hemorrhage that is very hard to control. And to deliver by splitting up the cervix as you would have to do to deliver the child, would be entirely wrong. Operate from above and get the uterus to contract down before the placenta is discharged. The hemorrhage is practically under control.

It is true, no doubt, that a large per cent of the mortality is because the children are not old enough to live. The circulation is cut off and the child born dead from using the child as a tampon, or there is an interference with the placental circulation. There is also the danger of lacerating the cervix through a too rapid delivery. The sacrifice of the child is secondary and to be more or less expected in case you are working to save the mother. If you can control the hemorrhage, there is no need of great activity, you can wait until the parts are dilated, even if it takes hours. It is only in those cases where the hemorrhage is uncontrollable that you must proceed rapidly and take your chances of further hemorrhage.

Lacerations, of course, increase the danger of infection. The danger of infection in placenta previa is greater than in ordinary cases. Not only from the handling, but also from the weakened condition of the patient.

A FATAL CASE OF ECLAMPSIA, AFTER THE DELIVERY OF TWINS.  
REMARKS ON THE ETIOLOGY AND PATHOLOGY OF  
THE DISEASE\*

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CHRISTOPHER G. PARNALL, M. D.

Jackson.

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Formerly First Assistant in Obstetrics and Gynecology  
in the University of Michigan.

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The following case is, I believe, of sufficient interest to present at this time. While the pathologic findings are not altogether easy of interpretation, still they are significant. It is only by a careful detailed study of every case of eclampsia coming to our notice that we may ever hope to ascertain the real cause or causes of this obscure disease.

Gynecologic No. 1235. Miss B. Age 16. German, single, schoolgirl. First pregnancy. First seen in the eighth month of gestation.

**Family History.** There have been numerous twin pregnancies in both paternal and maternal families.

**Personal History.** Negative. Has always been well and strong.

**Examination** (April 22, 1905). The patient is well nourished and weighs 125 pounds. There is moderate edema of the ankles. The skin, mucous membranes and joints are normal. The lateral lobes of the thyroid gland are moderately prominent. There is increased vesicular breathing over both lungs. The area of cardiac dullness is pushed upward. The valve sounds are normal. The radial pulse is 80.

**Special Examination.** The breasts are markedly enlarged, showing striæ; the areolæ and

nipples are negative. The abdomen is greatly distended from the pubes to the ensiform, being more prominent than the normal full term pregnancy. The striæ are very numerous. A transverse furrow or depression at the level of the umbilicus separates the enlargement, superficially, into two unequal eminences, the upper being the larger. The fetal small parts are very prominent on both sides. Two fetal hearts can be located, one in the upper right, the other in the lower left quadrant, rate 142 and 135 respectively. Vaginal examination shows the usual signs of pregnancy. The blood and urine examinations reveal nothing abnormal.

May 4, twelve days later, at 9 a. m., the patient began to have rather severe labor pains, accompanied by nausea and vomiting of a mild grade. She was kept in bed and given morphine. After a short remission the pains came on again.

May 5, 8 a. m. For the last twelve to fourteen hours the pains have not been strong. As the patient had passed no urine during this time, she was catheterized and 1000 c. cm. of clear urine obtained, which on examination showed no precipitate on boiling and adding nitric acid. Heller's test was negative. The urea estimated at 0.3 gram. per 100 c. cm., or 3 grams in twelve hours. Neither casts nor blood were present. At this time it was noted that the patient answered questions with hesitation and appeared somewhat stupid. Three hours later, vaginal examination showed the os dilated to admit three fingers, membranes unruptured, head of the first fetus at the level of the superior strait. The membranes ruptured about 2 p. m. and shortly

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afterward the feet of one fetus were found prolapsed, the head of the other presenting at the inlet. The patient was anesthetized and prepared for operative delivery. The os was dilated manually and the prolapsed extremities pushed up. The small presenting head was fixed in the pelvis by supra-pubic pressure in an O. L. A. position, high forceps applied, and the child delivered without difficulty. The second child was extracted by the breech. Both were females. Respiration was induced only after prolonged effort. The single placenta came away entire. A slight perineal tear was repaired at once.

One hour after delivery the mother had a typical eclamptic convulsion. Consciousness had not been regained. Croton oil was given, salt solution was administered by hypodermoclysis and by rectum, and veratrum viride tried. The convulsions, however, recurred rapidly, chloroform even not fully controlling them. In spite of all that could be done, the patient died within ten hours after delivery, having had between 30 and 40 convulsions.

Examination of the urine obtained by catheter four hours before death was as follows: Color pale, slightly turbid, specific gravity 1007, reaction acid. Albumin (heat and nitric acid), 1/5 by volume, urea 0.35 gram per 100 c. cm., few red blood cells, few leucocytes, a small number of granular casts.

It is of interest, in its possible etiologic relationship to the eclampsia of the mother, to note that both children developed a marked icterus which disappeared very slowly. Both lived.

Autopsy ten hours after death, by Professor A. S. Warthin.

#### *Brief of findings in principal organs.*

**Brain.** No evidences of thrombosis. Brain tissue soft. Marked edema. Section shows edema and congestion. **Heart.** Pericardial fluid increased. Valve flaps negative. The auricles contain white agonal clots. **Lungs.** Pleuræ negative. Marked congestion and edema. No thrombosis nor embolism. **Liver.** Capsule negative. The whole organ is enlarged, especially to the left. Consistency rather soft. Central veins congested. Peripheral portions of the lobules are light and have a slight fatty shine. **Spleen.** Congested. **Kidneys.** Edematous and congested. Both ureters somewhat dilated, more marked on right side, especially above the pelvic brim. Both pelves dilated and chronically thickened. **Intestines** show lymphoid hyperplasia and congestion. **Thyroid.** Lateral lobes somewhat en-

larged, right lobe 4 x 2 x 1.5 cm., left lobe 4.5 x 2 x 1 cm. The isthmus is very narrow, being represented by a small bridge of tissue. Neither external nor internal parathyroids were found. **Hemolymph nodes** and retro-peritoneal glands hyperplastic and edematous. **Uterus, ovaries,** etc. The uterus is enlarged, interior shows results of a recent delivery. Small amount of bloody lochia. Cervix large and soft, os patulous. Both ovaries normal, right contains corpus luteum of pregnancy. Vagina and vulvar opening relaxed and edematous.

#### **Microscopic Examination.**

**Lungs.** Markedly congested. Marked embolism of bone marrow giant cells. Syncytial "giant cells" in small numbers.

**Liver.** Practically normal. Slight fatty infiltration. No evidence of necrosis. No thrombi.

**Kidneys.** The most marked change is a necrosis of the tubular epithelium in certain areas. Professor G. C. Huber has very kindly identified for me the location of this change and, according to his opinion, the distal portion of the proximal convoluted tubules is the seat of the lesion. In other parts of the uriniferous tubules there is slight cloudy swelling and, in places, a very moderate desquamation of the epithelium. There is only a slight inflammatory change. A small amount of granular material can be found in a few of the tubules. No albuminous exudate in the glomerular capsules. Few round cells in the interstitial tissue. A small number of tube casts are present.

**Thyroid.** The colloid is much decreased and, in many places, takes the eosin stain only faintly. Most of the alveolar spaces contain no colloid and the epithelium forms papillary folds or irregular projections. Many of the alveoli are filled with desquamated cells.

There are so many conflicting opinions expressed by different authorities as to the cause of eclampsia that it has been termed by Zweifel "the disease of theories." A brief review of these theories of origin I shall attempt to classify roughly under the following heads:

1. **Kidney.** Rayner, in 1839, found albumin in the urine of pregnant women having convulsions. A renal genesis of



the disorder was at once suspected and the view is quite widely held today that the kidney lesions are the primary cause of eclampsia. Herzfeld and Mynlieff have resurrected Halbertsma's theory of mechanical interference with excretion of urine by compression of the ureters. Ahlefeldt, however, last year reported a case of hydronephrosis at term from compression of a ureter, without eclampsia. In advanced carcinoma of the cervix it is well known that chronic dilatation of the ureters may produce no symptoms whatever. Many cases of eclampsia have been reported in which there have been no marked kidney changes and no albuminuria. (Charpentier, Schroeder, Bouffe de St. Blaise, Schmorl, Ols-hausen, et al.) On the other hand, grave renal lesions may be present in the disease without albumin in the urine.

The renal changes in the majority of instances consist, according to Meyer-Wirz, in a parenchymatous degeneration of the cells of the tubules. In an analysis of 117 cases, there were old kidney lesions in eight. Inflammatory changes were rarely found. Bouffe de St. Blaise states that the kidneys in eclampsia show changes resembling the necroses in infectious diseases. Bell reports a case of eclampsia coming to autopsy in which there was a necrosis of the cells of the convoluted portion of the uriniferous tubules. The glomeruli were unaffected.

2. **Liver.** While hepatic lesions were noted in many cases coming to autopsy and the cholemia of pregnancy had been described by Frerichs, who with Rokitsansky (1857) had observed the condition of acute yellow atrophy in pregnant and puerperal women, still no very definite view concerning the possible hepatic

origin of eclampsia was advanced until Jürgens published his findings in 1886. He concluded that hemorrhagic necrosis was a more or less characteristic lesion in this affection. The almost constant presence of hepatic changes has been observed by many since this time, notable among whom are Schmorl, Pillet, Bouffe de Sainte Blaise, Meyer-Wirz, Ewing, Stone, Edgar and Williams.

In a rather recent article, Ewing lays stress on the changes in the liver in all cases of eclampsia coming to his notice. He makes a division of the disease into three classes, as determined by the type of hepatic lesion: 1. Hemorrhagic hepatitis: The liver is of normal size, and the surface and section show numerous hemorrhagic foci. Microscopic examination reveals marked degenerative changes with many points of necrosis. He says: "This lesion occurs practically without exception in all typical cases of acute fatal eclampsia at term, and in at least 95% of all cases of any variety of eclampsia. It is pathognomonic of this type of the disease." 2. Acute yellow atrophy: The liver is reduced in size. On section is mottled red and yellow with hydropic and fatty degeneration of the central and intermediate zones, a surrounding area of necrosis, and externally a narrow peripheral zone of cells showing slight change. 3. Eclampsia with minimal hepatic lesions: In this class there are no gross changes. Microscopically there is a diffuse granular and fatty degeneration, foci of necrosis, and areas in which the liver cells are distended with bile pigment. Stone concludes that the clinical characteristics of toxemia of pregnancy, eclampsia, and acute yellow atrophy of the liver "war-

rant the definite statement that they are one and the same disease." Williams doubts that these conditions are the same in etiology but confirms the view that characteristic liver lesions are found in eclampsia. Those who believe that liver changes are primarily the cause of the disease have formulated the theory of "hepatic insufficiency," assuming that the functional failure of the liver results in an altered metabolism with the development of various grades of toxemia.

3. **Intestine.** An intestinal origin of the poison causing puerperal convulsions has been suggested by a number of observers. (Budin, Chamberlent, Brown, Savory). Constipation certainly seems to be a predisposing cause, but in cases of eclampsia it is not always met with, and if it were the actual causative factor, convulsions of pregnancy would be the rule.

4. **Thyroid and parathyroids.** Lange (1899) in 25 cases of pregnancy without enlargement of the thyroid gland, noted in 20 the presence of albuminuria. When the thyroid is enlarged he found that the administration of thyroidin caused a decrease in size of the gland. Nicholson, in a number of late articles, confirms Lange's observations and advocates the use of thyroid extract in eclampsia, reporting a number of cases so treated. It is believed the thyroid system has as a function the production of substances which neutralize the deliterious products of nitrogenous metabolism. Nicholson's theory may be summarized in his own words: "In some pregnant women, for reasons which are at present obscure, the supply of iodothylin in the tissue becomes, gradually or suddenly, insufficient for the needs of normal metabo-

ism. Coincidentally, certain toxic substances (intermediate or imperfectly converted products of nitrogenous metabolism) find their way into the circulation. These toxins, by their special property of contracting the blood vessels, eventually lead to the arrest of the renal secretion. With the suppression of urine convulsions occur, and these do not seem to differ essentially from the fits of ordinary uremia. A deficiency of iodothylin is the primary fault." Others suppose that there is a specific antitoxin formed in the thyroid system which neutralizes poisons generated in the placenta. Nicholson in all his writings, however, assumes, much more than he demonstrates. For instance one report deals with a case of antepartum eclampsia in which thyroid extract was given after the patient had been delivered, the good recovery being attributed to the use of the thyroid preparation. Immediate delivery as a routine procedure has reduced the mortality from eclampsia in Zweifel's clinic from 28.5% to 11.25%, so that the medication in the above case can not be said to have established even the possibility of a favorable result. However, many cases have been reported by various men with apparently much benefit from the use of thyroidin. Vassale, Zanfragnini, and others have recently employed parathyroid extract in certain cases of eclampsia and here too, the results have been favorable. The function of the parathyroids is not at all understood, Vincent and Jolly, and MacCallum, from numerous experiments, show that removal of the thyroid alone produces symptoms which come on slowly, whereas removal of the parathyroids often gives rise to acute convulsive



attacks followed by death. In the case now reported we failed to find any parathyroid tissue. Whether this is of any special significance I am not prepared to say.

5. **Placenta and Fetus.** The ovular theory of eclampsia. It is believed by many among whom are Dienst, Fehling and Kehrer, that toxins resulting from fetal metabolism find their way into the maternal circulation and give rise to eclampsia. Dienst, as a result of his experiments, concludes that in eclampsia there is an abnormal permeability of the placenta which allows the fetal poisons to pass over into the mother's blood. The syncytium is thought by Veit and Scholten, Schmorl, Meyer-Wirz, Behm, Graefe, and others to produce the poison in eclampsia. This toxin is supposed to exert a hemolytic action and accounts for the thrombi found in the different organs. Time does not allow me to go into details, but the recent experimental work of Politi (1903), Capaldi (1903) and especially Liepmann (1905), regarding the toxicity of the placenta in eclampsia is certainly suggestive. With all allowance for errors of technic, accidental infection, etc., it would appear that there does exist a placental toxin in eclampsia.

6. **Other theories,** I can merely mention. The disease has been ascribed to circulatory disturbances in the brain, infection by bacteria, tumor-like proliferation of the syncytium, and lately, Zweifel has found lactic acid in the blood which he believes causes the convulsions.

The clinical and pathologic evidences certainly suggest a toxemic origin of the convulsions, but the toxin has never been isolated, and the results of experiments directed with a view to show the

presence of poisons in the blood serum and urine have been so inconstant as to make practically all the work along these lines of no value whatever. Bouchard, Volhard, Ludwig and Savor, Tarnier, Doloris and Butte, and others appeared to demonstrate that poisonous substances exist in the blood and urine. However, Schumacher, Stewart, and Olivier showed that the methods employed were open to criticism, and themselves conducted experiments with negative results. Semb, by a preliminary careful immunization of his animals against the toxic action of normal blood serum, has recently found that the injection of serum from eclamptics is fatal in a large majority of cases.

In the case now reported the most important points to be emphasized are the absence of hepatic changes beyond those normally occurring in pregnancy, and the presence of the pathologic alterations in the kidney and in the thyroid gland.

The kidney lesion is a coagulative necrosis of the epithelial cells of the distal portion of the proximal convoluted tubules, with a beginning degenerative change in other portions, and slight acute inflammation. The renal changes may be explained on the ground that the toxin passes through the cells of the convoluted tubules, which, according to Ribbert, have some secretory function.

The significance of the change found in the thyroid is not at all clear. Whether it represents an over activity, a condition of functional derangement, or a state of insufficiency, is problematic. It is possible that we are dealing with a case of exophthalmic goiter not recognized during life, although this does not seem probable. The changes resemble those found in Grave's disease, but are



not exactly typical. It is now generally considered that exophthalmic goiter represents a hyper-activity of the gland or a condition of deranged function. The decrease in the amount of colloid might presuppose a diminished production of normal secretion, or, according to Lange's theory, a thyroid incompetency. From a single case we can only theorize and that with much mental reservation. By analogy, however, it seems that we are dealing with a condition of hyperthyroidea. This hyperthyroidea may have been induced by an increased demand for thyroid secretion to act as an antitoxin to a poison formed in the placenta which in the case of twins would in all probability be in much larger amount than in single pregnancies. The hyperthyroidea might then be only apparent, and in reality an insufficient quantity of secretion formed for the particular needs of this individual. On the other hand an over-production of specific secretion might in itself constitute the real danger. This being

the case antithyroid medication would be indicated.

In drawing conclusions from this one case and from the literature we may infer:

(1) That eclampsia is due to a toxemia, the origin of which is not known but which, in the light of recent investigation, is quite possibly of placental genesis.

(2) That characteristic hepatic changes are not present in every case of the disease, and when occurring are probably secondary.

(3) That in rapidly fatal cases the kidneys as eliminative organs will probably be first affected by the poison and will show the chief changes in the epithelium of the distal portion of the proximal convoluted tubules, and,

(4) That alterations in thyroid gland function may be directly or indirectly responsible for the development of the toxic state resulting in eclampsia.

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## DISCUSSION.

**J. G. Lynds**, Ann Arbor: The question of eclampsia is wide and interesting and one we know very little about, and we do not seem to get knowledge on the subject very rapidly. The cause is entirely unknown. There are a great many theories, but what the poison is or where it originates is absolutely unknown. Different theories in different cases seem to have some weight. Taken all together I do not know that they do. In some cases all theories seem to fail.

**E. T. Abrams**, Dollar Bay: It is well for the practitioner to have outlined some line of treatment which he proposes to adopt when he encounters a case of eclampsia. If he doesn't, he is like a mariner at sea, without a compass. It seems to me, as I look back on my own practice, the best results have been obtained by the eliminative treatment. I believe in the old practice of bleeding in such cases. When called and you find the child is viable, you are going to allow labor to proceed to its legitimate end. Therefore, I would bleed the patient and get rid of as much of the poison as possible, and replace the blood by saline injection. There are too many who deliver immediately and make bad matters

worse. First bleed, then transfuse, then deliver. Never the other way about.

We do not know the cause. It is a good deal like the vomiting in pregnancy in that regard. We have to try many and various remedies to combat the trouble and often nothing has any appreciable effect.

However, what I have said will give my line of treatment and I have had fairly good success.

**J. H. Carstens**, Detroit: We really know very little about eclampsia. We all have our theories. Here was a case that was carefully examined and nothing found. Two weeks after she had eclampsia. It is pretty strong evidence of a bad case. I believe in quick delivery, because we find that by delivering a majority are relieved of the convulsions. Where the convulsions come on after delivery, our treatment is of little avail.

**H. W. Yates**, Detroit: I gather from the paper of Dr. Parnall that we should get as far away from the old idea as possible, of the kidney and urinary organs being the cause of eclampsia, and that there is some internal change, which we do not know, that is the cause. There is a strong sentiment in favor of the metabolic cause.



## IODIZED CATGUT\*

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W. T. DODGE, M. D.,  
Big Rapids.

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For many years I have used the commercial brand of catgut known as the "Red Cross" with confidence that it was thoroughly sterilized by boiling in cumol and that the double envelopes efficiently protected it from reinfection. When infected wounds occurred, after aseptic operations, I attributed the incident to defective technic on my part or on the part of my assistants and redoubled my efforts to sterilize my hands and everything coming in contact with my patient. So little difference in results were noted by the use of rubber gloves that I did not adopt them for all cases until May, 1905, when, after a visit to the east I was convinced that I could no longer afford to abstain from their use. Still my percentage of suppurating wounds in clean cases continued about the same as before. At the Petoskey meeting of the State Society, Dr. S. C. Graves, of Grand Rapids, read a paper upon the subject of catgut and presented statistics showing results in his practice from the use of various commercial brands. I noted that his percentage of suppurations after using "Red Cross" catgut was very large and determined to commence the use of that of some other manufacturer.

Shortly after, an article appeared from Dr. N. Senn, of Chicago, upon iodized catgut prepared according to the method of Claudius. Dr. Senn stated that he had used this catgut for several years with uniformly favorable results. Several years before, the same author had published a similar paper, and I had then prepared some catgut according to this method, but unfortunately the strands I examined had become so fragile that they were useless, and I had not persevered in its use. With my attention called so vividly to the possible dangers of catgut prepared by commercial houses, I determined to make a thorough clinical test of the Claudius catgut and have since used it to the practical exclusion of all other suture material with great satisfaction to myself and with, I am sure, the saving of much time, pain and danger to my patients.

Iodized catgut is prepared by loosely winding raw catgut upon glass spools and immersing in the following solution for eight days:

Iodine resublimed.....	1 dram
Potass. Iodidi.....	1 dram
Aqua Distilled.....	100 drams

It is then transferred to 1% iodine solution in alcohol or to a 10% iodoform solution in alcohol, where it will gener-

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\*Read before the Surgical Section, at the Jackson meeting of the Michigan State Medical Society, May 23-25, 1906, and approved for publication by the Publication Committee.

ally maintain its strength indefinitely. In fact I have now some strands of catgut that I placed in the aqueous solution in June, 1903, that are still strong and fit for use. It so happened that the strands I examined at the time were fragile, but others remaining in the bottle for more than two years, maintained their strength.

I now know that the reason for the complete loss of tensile strength in some strands was due to their having been wound tightly upon the spools. This point was brought out by the paper of Nancrede, Waldron and Tenney at the Petoskey meeting last year. The gut should be wound on the spools loosely and if this is done it will be found to preserve its tensile strength indefinitely.

When preparing for an operation I have the nurse remove the gut from the solution and rinse off the iodine in a bowl of sterile water. If left in water too long it becomes friable, so after thorough rinsing I have it transferred to a sterile towel and then it is ready for use. So prepared, the gut is perfectly black, pliable and strong and lasts in the tissues much longer than does the cumol gut.

I have collected statistics of my clean cases at the hospital from Jan. 1, 1905, to May 1, 1906, limiting the cases to those operated upon by myself and to hospital cases, because all the other conditions surrounding these patients were as near alike as possible. The same method of skin preparation was used in all and the same personal equation was operative in all.

I divide the cases into three classes. The first class consists of 21 cases operated between January 1st and May 1st,

1905, in which rubber gloves were not worn by the operator or assistants. Of these, five suppurated, or 23.7%. From May 1st to July 1st, 20 cases were operated, rubber gloves being worn by operator and assistants. Of these four suppurated or 20%.

These nine cases of suppurating wounds were all cases of marked infection in which sloughing of the tissues occurred, delaying union from three to six weeks and making it necessary to open up the wounds throughout and pack with antiseptic dressings. "Red Cross" catgut was used in all these cases. During July and August, I was away from home and did no operating. From September 1st, 1905, to May 1st, 1906, I operated 50 clean cases at the hospital with three suppurations, or 6%. In the first 40 of these cases, I had 100% of primary unions. Iodized catgut was used in all these cases but in the three suppurating cases the gut was prepared in 1% alcoholic, instead of an aqueous solution of iodine. In one of the suppurating cases only was there a complete breakdown of the wound. It was a complete abdominal hysterectomy for an eight-pound fibroid having its center of development well down on the cervix, thus obstructing the uterine canal and preventing perfect preparation of the vagina. When the vagina was cut across, a considerable quantity of discharge was seen to be passing from the uterus and the cellular tissue above the vagina as well as the abdominal incision became infected. After suppuration stopped, the wound was closed by secondary sutures and healed kindly. One of the other cases was a resection of eight inches of the transverse colon in

which a little pus formed at the lower angle of the wound which, however, did not materially interfere with healing, as the wound was firmly closed and the patient out of bed in 14 days. Possibly slight infection occurred from the divided bowel.

The third case had also a slight discharge from the lower angle of the abdominal wound following removal of a seven-pound sub-peritoneal fibroid. The discharge only showed on one occasion and the patient was able to leave the hospital on the eighteenth day. So, practically speaking, all but one of the 50 cases had primary union of the wounds and the source of the infection in that case was obvious. I might well have omitted it from this list as not a clean case.

When I first commenced the use of

iodized gut, I had a number of cases in which there was, a few days after the operation, a discharge of a dram or so of bright claret colored serum. It seemed in no case to interfere with the prompt healing of the wounds and since rinsing the gut more thoroughly in water before using, I have not seen it. In addition to these cases, I have frequently used the iodized gut in infected cases or where infected fluids came in contact with the wounds, in which the iodine in the gut caused it to resist the infection. I believe that the iodine not only renders the gut sterile, but gives it an antiseptic property that enables it to resist the action of septic germs. As it is easy to prepare, pleasant to handle, and withal, inexpensive, I see no occasion to further experiment with the expensive products of the commercial houses.

### DISCUSSION.

**W. H. Hutchings**, Detroit, had recently conducted experiments in heating catgut in absolute alcohol in sealed glass tubes by steam under 15 lbs. pressure. This had failed to kill anthrax, and the method seemed to be ineffectual.

**J. N. Bell**, Detroit, related a case, recently operated, in which a No. 2 catgut had not held and

the patient died of hemorrhage.

**E. C. Taylor**, Jackson, had adopted iodized gut in January, 1906, and has had no sepsis since this change from the commercial gut.

**Dr. Dodge**: Iodized gut lasts ten days, and is pliable and convenient.

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**The Poison of the Meningococcus.**—A. P. OHLMACHER, Detroit, by experiments on horses has demonstrated the existence of a powerful poison from the meningococcus, the effects of which are best manifested by intravenous injections of a filtrate through paper of a trikresolized extract of a three to six weeks' culture on a glucose-chalk-bouillon. The symptoms produced are restlessness, increase of pulse, temperature and respiration, profuse perspiration, together with the special nervous symptoms of progressive asthenia, tremors, clonic convulsions and transient opisthotonus, excessive irritability, spasms being

caused by noises or unexpected touch, and finally death from exhaustion. The nervous manifestations were best produced by the special culture product above mentioned, but ordinary broth cultures were also toxic; sufficient subcutaneous doses of the special extract, besides causing fever and extensive local swelling, also gave rise to the nervous symptoms. The poisonous effect was absent when the fluid was filtered through unglazed porcelain bougies or balloons, but was present and active in the product of filtration through Berkefeld candles or paper.—*Jour. A. M. A.*, July 21, 1906.



## SYSTEMIC DISTURBANCES SECONDARY TO PATHOLOGIC CONDITIONS IN THE NOSE\*

J. E. GLEASON, M. D.,  
Detroit.

In the few minutes at my disposal, it is impossible to enter extensively into a discussion of secondary disturbances caused by pathology in the nose. I have therefore, confined myself to certain symptoms which are related more especially to internal medicine, and which were well illustrated by the following case of chronic empyema of the accessory sinuses, which I have recently had occasion to follow:

A lady, 31 years of age, came under observation Oct. 16, 1905, on account of dull headache localized in the forehead and right temporal region, which had been a more or less constant symptom for nearly ten years. Recently on account of its severity, she had lost one or two days a week. When stooping over, she experienced a marked flushing of the face, associated with a feeling of fullness of the head, dizziness and the appearance of black spots before the eyes. Since the previous July, she had had attacks of palpitation of the heart, with tachycardia, brought on by slight exertion or excitement. She had been treated for stomach trouble without relief. Correction of her hyperopia by a careful oculist had also failed to relieve her headaches. Some temporary relief was afforded by the use of headache powders to which she had been compelled to resort. She had practically given up all society and was greatly discouraged over her condition. The following notes taken from my records, show the condition at that time: The patient is a slight, nervous woman, markedly underweight for her height. Complexion is some-

what sallow. Haemoglobin 70%; urine examination negative. Examination of nose shows the right nostril filled with crusts and secretion, after removal of which there is seen a markedly atrophic inferior turbinate. The middle turbinate is large with moderate atypical hypertrophy of its mucous membrane. From the middle meatus flows a white, muco-purulent discharge, which is renewed as soon as removed. The post-pharyngeal wall is dry and glistening, and covered above with crusts. There is no secretion from the sphenoidal recess. The left nostril shows a moderate hypertrophic rhinitis. Diagnosis—Empyema of one or more sinuses of the lower series. By a process of exclusion, a diagnosis of chronic empyema of the right frontal and anterior ethmoidal sinuses was made. Intra-nasal treatment, by affording free drainage, soon relieved the pain, and in the course of a few months gradually reduced the amount of secretion, until at the last examination, May 7th, it has practically disappeared. The patient's weight has increased nearly 15 pounds; the hæmoglobin is 90%; the headache and stomach symptoms are practically absent and the patient has not felt as well in years as she does today.

This case, thus briefly outlined, illustrates fairly typically the most important of secondary disturbances characteristic of chronic suppuration within the nose. In these conditions headache is a frequent, but by no means a constant symptom. In a majority of cases, a dull pain is experienced in the frontal region, although temporal and occipital headache are by no means uncommon. Duration, as well as intensity, show great varia-

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tions. There may be days or weeks of relative relief from pain, alternating with periods of intense headache. This periodicity may be dependent upon either local causes, or upon psychical disturbances or mental exertion. Too much stress can not be laid upon the latter. Many of these cases go their life long with a diagnosis of nervous headache without a suspicion of its nasal origin. Hajek claims that practically all the so-called nervous headaches are due to pathology within the nose. At any rate, such a diagnosis should never be accepted until thorough examination of the nose shows the absence of an empyema or other sufficient local cause.

Symptoms on the part of the respiratory tract secondary to empyema of the sinuses are most frequently inability to breathe through the nose, the result of changes in the nasal mucous membrane in the form of hypertrophies and polyps. Dried secretion may also occlude the nares. Reflex disturbances, as evidenced by asthmatic attacks, are not uncommon. A diseased pharynx with repeated attacks of angina, and by continuity a diseased larynx arise from the continual bathing of these parts by secretion flowing backward from the nose. Cases of this kind are too often treated indefinitely by sprays and applications while the primary existing condition within the nose is overlooked. In the very old cases, chronic bronchitis with emphysematous changes in the lungs follow the chronically inflamed condition of the upper air passages.

Gastro-intestinal disturbances are often simulated by nausea produced by the irritable condition of the throat, and the endeavor to expell dry secretion from

the nasal-pharynx. Chronic gastro-enteritis, however, does result from the continued swallowing of large quantities of secretion, and such a condition naturally resists all local treatment. Bad taste and nausea appear generally in the morning, the recumbent position occupied during the night favoring the inundation of the pharynx by the secretion.

Other symptoms of a somewhat indefinite nature characteristic of chronic suppuration within the nose, are illustrated in this case, and are exceedingly important, because when dominating the clinical picture they are often misinterpreted. I refer to the so-called congestion and depression conditions as emphasized by Hajek. These consist in various vasomotor and nervous disturbances which are generally suggested by the term neurasthenia. Among the former are to be mentioned flushing of the face associated with cold extremities, palpitation of the heart and tachycardia, coming on as a result of various external stimuli. I remember a patient of Hajek's who at each meal experienced just these symptoms, at times so pronounced that he was obliged to leave the table. That man was cured by drainage of a chronic empyema of the antrum of Highmore.

Such patients sleep badly and are therefore incapacitated for their daily duties, and become extremely irritable and morose. Especially is this true when there is associated with these symptoms a chronic headache. Such patients are in line to become hypochondriacal or melancholic. That such conditions should result is not to be wondered. The wonder is that the significance of a profuse discharge from the

nose should so often escape the notice of the patient for so long a time. He dismisses it under the supposition that it is a chronic cold or an evidence of catarrh. It therefore devolves upon the physician in the course of his examination to bear in mind that general disturbances may result from pathology within the nose, and to make a routine

practice of nasal examination of all suspicious cases. Secretion, soon renewed after thorough cleansing, crusts, polypi, atypical hypertrophies, and atrophy are all suspicious local signs. Careful search for them together with proper appreciation of their significance will often result in mutual advantage to both the patient and to the physician.

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### CONCERNING THE TREATMENT OF TETANUS\*

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W. H. HUTCHINGS, M. D.,  
Detroit.

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It is not my intention to take up valuable time of this society with any extended review of the voluminous and altogether satisfactory literature of this disease, or to comment on the interminable statistics which have been compiled concerning it. I would rather speak briefly of some of the principles involved in its treatment and make some suggestions as to how the establishment of morbid conditions may be prevented, or when once established, combatted.

In the management of tetanus, we have two things to consider. First prophylaxis, and second, treatment of the disease after the symptoms have appeared. In the prophylaxis we must give our attention first to the wound. As is well known, there are certain wounds which are more likely to be com-

plicated by tetanic infection than others, the so-called fourth of July injuries, punctures with nails, rake teeth, etc. When called upon to treat any case in which we have reason to suspect the probability of tetanic infection we must be most thorough in our local treatment. The wound should be widely opened, curetted, the deeper parts searched for pieces of cloth, wads, and other foreign materials, thoroughly washed with hydrogen peroxide, which performs the double function of mechanical removal of infected material and the bringing of free oxygen into the deepest part of the wound, then packed with iodoform or iodine gauze. In the treatment of these wounds we should use no disinfectants that will cause an eschar, the formation of which, by preventing the access of air, gives the tetanus bacilli ideal conditions for development. Above all we must disabuse our minds of the idea that

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any of the ordinary disinfectants will destroy tetanus spores present in a wound. These are among the most resistant of micro-organisms and carbolic and bi-chloride in the usual strengths have little more effect on them than water.

After thorough local treatment we should in every case give prophylactic doses of anti-tetanic serum. I consider it of importance that these prophylactic doses should be repeated on successive days. We should not trust to one injection as it is not possible to determine at just what time in the course of the disease tetanus bacilli begin to develop. I will not go into the statistics, but will say that in both veterinary and human practice its exhibition has proven of greatest advantage, so much so that in many foreign surgical clinics, every case of recent injury is given this treatment.

Let us now consider the treatment of the disease after the appearance of the symptoms, for it has been well said that the beginning of symptoms is the beginning of death from the disease, not the beginning of the disease. When confronted with a case we have two things to do; first, to prevent formation and absorption of fresh toxin; second, to control the change which the absorbed toxin has already produced.

There is in every case, at the time we see it, toxin in the body which has been formed by the germs, but which is not yet in combination with the nerve cells. The administration of anti-toxin is our best method of preventing this union. We should therefore, if possible, even before we treat the wound, give anti-toxin both intravenously and subcutaneously in the vicinity of the wound. After a careful study of the experiments

of Meyer and Ransom, Tiberti, Zupnick, and others, I am not convinced that the axis cylinders are the chief means of conveyance of the toxin to the nerve cells, and I do not believe that the injection of the nerve trunks with anti-tetanic serum is of the supreme importance, which has been assigned to it. It should however be tried. The pathogenesis of tetanus is yet to be definitely decided.

In order to prevent the formation of new toxin we have to direct our attention to the wound. We know that it is infected with tetanus. The indication is therefore clear: get rid of this infection by thorough local treatment, if possible, if not, by amputation, but get rid of it. This however in most cases is easier said than done. I think in a large majority of cases which die from tetanus that properly taken cultures would show growing tetanus bacilli. I can illustrate this by a case which came under my observation. The patient, a 14-year-old boy, was injured by the explosion of a firecracker which produced a lacerated wound of the thenar eminence of the left hand. The father, a doctor, appreciating the danger of the wound, gave it prompt and what he considered effective local treatment. Despite this, some days later the boy developed tetanus and was taken to a hospital. The attending surgeon opened the wound under general anesthesia, curetted carefully and gave intravenous and subcutaneous injections of anti-tetanic serum. Despite the serum treatment combined with morphine and chloral and the daily curetting of the wound, the patient died. A short time before death, as a last resort, the arm was amputated. Eight cultures

taken from various places in the wound all showed tetanus bacilli.

Another case has been reported by Dr. T. B. Cooley, of Detroit, which continued to become worse despite curetting and wide opening of the wound. Further examination showed that one-half inch beyond the bottom of the wound in apparently healthy tissue was a small piece of clothing which was producing the tetanus. This was removed and the patient recovered.

The wound, then, should be opened and treated thoroughly, (I cannot make this too strong), even to complete excision going one-half inch into the healthy tissue on all sides. If a finger or toe, it should be amputated. If there are multiple wounds or for any other reason complete disinfection cannot be secured, amputate, for this is the only sure way of securing complete disinfection. And even the value of amputation has been questioned.

Now, having done what was necessary to prevent the absorption and formation of fresh increments of toxin, we must take care of that which has already been absorbed, and is combined with the nerve cells. Here our treatment must be symptomatic for we do not possess any specific which will break up the combination of the toxin with the nerve cells when once established. The body must do this. The chief symptoms to be met are the tonic and clonic muscular contractions. If we can control these we can cure almost every case of tetanus for it is this tremendous muscular contraction which by exhaustion, by increasing the metabolic poisons and decreasing their elimination produces death. For this purpose many drugs have been

used. Chloroform will, of course, control them, but its prolonged use is not well borne. It is very effective to control the occasional very severe convulsions and many patients who die in one of these might be saved by its prompt use. Morphine and chloral have been extensively used and have been effective in many cases. In some, however, they have completely failed. The ideal method would be one by which the hypersensitiveness of the nervous system could be reduced by some means which would not interfere with the elimination of the poisons of the germ from the body. In this way we could prevent the exhaustion of the convulsions and the increased production of the auto-poisons, and at the same time allow the body to overcome the tetanus toxin. The nearest approach thus far to this has been the various methods of intraspinal treatment. Murphy (1904) has reported a case successfully treated by the injection of morphine-eucain solution which controlled the spasms after anti-tetanic serum had failed and more recently Blake has cured a severe case by the injection into the spinal canal of a 25% solution of magnesium sulphate. The convulsions were at once controlled and recovery followed. These results are most encouraging and other less poisonous drugs should be tried, such as chloretone, which can be given by the mouth and is comparatively harmless. I am trying this experimentally on animals, but as yet have arrived at no definite conclusions.

Another method of preventing convulsions which is never to be overlooked, is the elimination of the external stimuli which cause them. The patient should

be kept in a dark room absolutely quiet and as far from all sounds and other disturbances as possible. While this may sound trite, I have seen in one of the great surgical clinics, a patient suffering with tetanus taken from a general ward on the third floor, down the elevator, across an open court and into an amphitheater filled with students where intracerebral injections of anti-toxin were given. Considerable surprise was expressed by the eminent surgeon that the patient died.

Still another method in the treatment of tetanus must be considered. This is the Baccelli treatment, which is believed by its author to be specific and which in his hands has given surprisingly good results. Baccelli reported at the last Italian Medical Congress, of which he was president, 10% mortality. It is only fair to say, however, that the Italians have always secured better results in the treatment of tetanus than any other observers. It would seem that the Italian variety of tetanus is not so virulent

as that found in other countries. This treatment consists in hypodermic administrations of from 2-3 c. cm. of a 2% solution of phenol, every two or three hours, until carbolic acid appears in the urine. The only case of tetanus which I have seen cured, was treated by this method, following amputation.

Still another means at our disposal is very free bleeding followed by the administration of a salt solution. Whether this removes toxin in the circulation or only removes part of the metabolic poisons, it has been proven of great advantage in veterinary practice.

C. S. Oakman, Detroit, had seen many cases of fire-cracker and cartridge injuries, and in one series a uniform procedure was adopted; the wound was thoroughly dissected and all foreign matter removed, one injection of antitoxic serum given, and cultures taken from the wounds. No case of tetanus developed, but an appreciable percentage of the cultures grew tetanus bacilli. Present therapeutics affords no single specific, and we must rely on the "shot-gun" method of using every means. Especially should these cases be regarded as surgical, and prophylactic treatment be the first for all wounds in which tetanus may be suspected.

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The change of dressings of burns may be made painless, and the growth of epithelium encouraged, by employing next to the wound sterile strips of gutta-percha in the same manner as for skin-grafts. Subiodide of bismuth lightly dusted on the granulating surface stimulates epithelial growth.

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Severe pain in the orbit or even in the eye itself should make one think of frontal sinus infection, especially if there is, or recently has been, a nasal discharge. Marked localized tenderness will soon confirm the suspicion, if the disease exist.

Whenever the arrangement of a patient upon the operating table requires an extremity to occupy a constrained position, that position should be shifted from time to time to avoid pressure paralysis. The anesthetist should never draw the arms alongside the head, nor permit the strap of a leg-holder to press, for more than a few minutes at a time, upon the brachial plexus in the neck.

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When it is necessary for the anesthetist to hold the patient's jaw forward, he will obviate much subsequent soreness by exerting the pressure upon only one side at a time.



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SEPTEMBER

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### Editorial

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**The Present Neglect of Vaccination**

can hardly fail to strike anyone who has to do with public health work or who has occasion to examine any large number of children. As a routine procedure it would seem to be much less common than it was a decade or so ago, and it is apparently becoming still less frequent. This observation is brought home with especial force to the physician who has had opportunity to observe any of the recent outbreaks of smallpox, or who takes the trouble to study such statistics as have been compiled from them. Two examples, of the many that might be cited, will serve well to illustrate present conditions. On the occasion of an outbreak of smallpox in one of the smaller cities of this state, in which the standard of intelligence might be supposed to be unusually high, a census of the children in the public schools showed that less than 20 per cent had ever been successfully vaccinated, and this in spite of a previous smallpox scare three years before. One of the great manufacturing firms of the country has found it no longer profitable to make vaccine, and during the present year has suspended its production.

The causes of this condition are not

far to seek. Whatever influences may be ascribed to the anti-vaccination movement in England, or in certain of the eastern states, it certainly plays a very small part with us. The chief factor here is beyond doubt a growing indifference to the importance of general vaccination on the part of the medical profession as well as the laity. The comparative rarity of the severe type of smallpox during the last two decades has induced a false sense of security. The younger generation, for the most part, has never seen the disease in its more dreadful forms, and the older one has well nigh forgotten it. The recent prevalence of a very mild type, scarcely more serious than chicken-pox, seems, moreover, to have given rise in the minds of many to a vague idea that the graver type has disappeared—run out, so to speak—and that there is no longer any real reason for dread. To this general indifference must be added another factor which is too often undervalued, namely, a genuine and more or less well founded dread of vaccination on the part of many who have observed in the case of friends or neighbors, or in the public prints, unpleasant and even serious results to follow it. It is not at all uncommon to hear a man say that he would take his chances of smallpox rather than be vaccinated, and the argument is not always an easy one to meet. The condition that confronts us is really potentially quite serious. We have a large and increasing unvaccinated population which would furnish a most fertile soil for the spread of an epidemic if it should once obtain a foothold, and the severe Boston epidemic of 1902, or the occurrence of a number of hemor-

rhagic cases in Boston a year ago is ample evidence that the mild form has not entirely supplanted the graver one; nor have we yet any good ground for supposing that the milder type is fixed, and may not at any time revert to the other. Conditions are undeniably ripe for very serious trouble in almost every part of the country, and this is the more to be regretted because smallpox is by far the most easily and surely prevented of all the infectious diseases. There is nothing in medicine more certain than that vaccination protects, and no such brilliant results can be shown in any other line of preventive medicine as have followed systematic general vaccination in the countries where it has been carried out. We in America are in a fair way to lose the benefit of what is perhaps the greatest discovery in medical history, and that through nobody's fault but our own.

The remedy lies with practitioners of medicine. State boards and health officers may preach vaccination as much and as earnestly as they please, but the way to overcome the indifference of the public is by the offices of the family physician, who is not doing his whole duty if he does not inform himself as to whether or not the members of the families he visits have been vaccinated, and urge it upon them if they have not. The writer is far from being an advocate of compulsory vaccination in America under present conditions—whether or not it might be wise at some future time in another generation—but he does believe firmly that a more active interest in the subject on the part of the practitioners in general would lead to a vast improvement over present condi-

tions.

With regard to the second factor mentioned—the widespread dread of vaccination—it is unfortunately true that the blame for this lies largely at the door of the profession. It is most surprising to find how many of the laity believe that vaccination has not “taken” properly unless there are ulceration, much swelling, and all the other accompaniments of infection, and still more astonishing to see that these things are looked upon by many physicians as natural and not at all out of the way. It is not to be wondered at that people who are used to seeing such results should dread the operation. The fact is that too many of our profession look upon vaccination as so trivial a thing that it can be done carelessly, with no special attention to surgical cleanliness, and then left to take care of itself. If more physicians made a practice of seeing every patient they vaccinate at the end of six or eight days there probably would be less of this trouble. It is, of course, understood that more or less constitutional reaction normally follows vaccination, especially in the adult, and that rarely a case of generalized vaccinia cannot be avoided; but ulceration, sepsis, vaccination tetanus, and other untoward results can be excused only in case the patient has deliberately disregarded the careful instructions for after care of the arm that should have been given him by the physician. The time has passed when all such happenings could be attributed to the virus used. It is only fair to the profession to say that no one can afford to give the care and attention to vaccination that are required for uniformly good results at the ridiculously

small fees usually charged for the service, and it is time that a change should be made in this regard. It is a minor operation requiring care and good technic and some after attention, and the charge should be in proportion.

It rests with us, then, if we wish to avoid future trouble, to educate the public out of its present indifference to the advantages and necessity of general vaccination, and by an improvement in our methods and a corresponding decrease in unpleasant results to show them that, properly done and properly cared for, the operation is not one in the least to be dreaded. One point is perhaps not so generally understood by the profession as it should be: that is, that the inevitable moderate constitutional reaction is least in infancy, and increases with age, so that the most favorable period for the first vaccination is the first year of life. Revaccination, properly done, is seldom followed by annoying symptoms.



**Opsonic Therapy.**—Very much in the public eye of the medical world at the present moment is Wright's theory of opsonins and opsonic action. Temporarily at least it has eclipsed the brilliant and ingenious side-chain hypothesis of Ehrlich. This obscuraton is no doubt largely due to the appeal which Wright has made to active medical practitioners by early turning his work to the practical every-day problems of clinical medicine. A larger audience has been reached than by the more distinctly laboratory environment in which Ehrlich's theory has been pursued, and for the time being at least Wright's laboratory in London has be-

come the Mecca for pilgrims in search of the latest gleanings of bacterio-therapeutic lore. And in that laboratory one finds the master busily engaged in testing his products on human beings afflicted with various disorders. In other words, Wright conducts a clinic, and his subjects are men, as well as guinea-pigs, mice, and rabbits. Moreover, unless all accounts are unreliable, he is effecting some astonishing therapeutic results, and it seems safe to predict that a new era in biologic therapy has been inaugurated in which bacterial vaccines, controlled by accurate opsonic measurements, will be employed to combat a number of infectious diseases hitherto beyond the reach of medical skill. At the present moment this list includes disorders arising from infection with the pyogenic staphylococci, streptococci, pneumococci, gonococci, typhoid bacillus, colon bacillus, and the bacillus of tuberculosis. Thus in such staphylococcic infections as chronic furunculosis and acne, pneumococci infections like intractable empyema and arthritis, and tuberculous lesions like lupus, cystitis, pyelonephritis, arthritis, osteitis and phthisis in its early stages, truly astonishing curative effects have already been achieved by Wright and others.



**Opsonic Intricacies** are, however, encountered in the practical application of Wright's methods. Indeed, without the skill of an expert bacteriologist familiar with ordinary bacteriologic technic and thoroughly competent in the latest methods of serum pathology, the task would be hopeless. One must needs be able to isolate and identify the infecting



organisms in a doubtful case, to determine the "opsonic index" by a process highly refined in the delicacy of its manipulations but most satisfactory in its results, and finally to proceed with theoretic rationality the operator should prepare some, if not all, of his vaccines. Dosage of the vaccine and repetition of dose are determined by the fluctuations in the opsonic index of the patient's blood serum. It is plain that opsonic therapy is to be successfully practiced only by medical men who combine with good clinical acquirements the highly developed expertness of the accomplished laboratory specialist. The relatively few men possessing this happy combination of knowledge and skill will become "opsonic consultants," so to speak, of the general practitioner or the specialist in purely clinical lines.



**The one criticism of Dr. McCormack's** meetings in other states has been that they were not well advertised and were therefore not attended by as many of the profession and of the laity as should have been the case. Let us not make this mistake in Michigan. We have five weeks in which to make preparations, and we have the experience of other states to guide us. We also have a sufficient sum of money for the detail work, the Council having appropriated two hundred dollars for the purpose. Dr. McCormack's own expenses are paid by the American Medical Association.

Before considering the details of the itinerary, let us have a clear understanding of what Dr. McCormack is doing. He is not, as some suppose, going about

telling the profession "how to be good," he is not "reorganizing," and he is not holding "love feasts" for the doctors alone. He is rather striving to tell the *public* what organized medicine stands for and attempting to uproot the more or less inherited antagonism to the medical profession which is inherent in many communities. He takes up many of the present day evils, such as drug store practice, the social disease evil, the harm resulting from not paying doctors' bills, the patent medicine question, and questions of sanitation. He makes it plain to the public that physicians have no interests which are not as well the interests of every individual in the community.

Judging from the reports received of Dr. McCormack's addresses in other states, there is not a dull moment in any of them. He is a splendid speaker and has that magnetic personality which never fails to charm every listener.

Let it be understood then that the meetings are not "medical meetings," but are for public addresses. It will be to the advantage of every physician to see to it that his patrons—lawyers, bankers, school teachers, merchants, farmers—"the butcher, the baker, et al."—are invited and urged to come.

Everyone who hears the addresses will ever after better understand the motives, the ambitions, the tribulations and the trials of his physician. Dr. McCormack promises to make the day worth any month's practice to every physician, a portion of whose clientele are present.

The proposed itinerary is as follows: Detroit, Monday, October 8th; Ann Arbor, October 9th; Jackson, October 10th,

Lansing, October 11th; Charlotte, October 12th; Battle Creek, October 13th; Kalamazoo, Monday, October 15th; Benton Harbor, October 16th; Holland, October 17th; Grand Rapids, October 18th; Greenville, October 19th; Big Rapids, October 20th; Cadillac, Monday, October 22nd; Traverse City, October 23rd; Marquette, October 24th; Sault Ste. Marie, October 25th; Bay City, October 26th; Saginaw, October 27th; Alma, Monday, October 29th; Flint, October 30th; St. Johns, October 31st; Lapeer, Thursday, November 1st; Port Huron, November 2nd; Adrian, Saturday, November 3rd, thus completing a four weeks' trip.

At this writing not all of the above schedule has been approved by the Council, and it is possible that some of the dates may be changed. We invite suggestions from the members of the Society.

In the larger places it is probable that a meeting of the physicians will be held in the afternoon and a public address given in the evening. The meetings will be held under the auspices of the district societies and of the county societies of the counties which are on the list.

In order that the greatest possible good may be accomplished, an explanatory circular letter will be sent by our president to every doctor in the state. The councilors and county societies will also send invitations. Due notice of the meetings will also be given in the local press.



**Dust, Flies and Tuberculosis.**—Opportunity to impress upon the laity two important factors in the spread of

tuberculosis and other infections was overlooked by the various lecturers in the excellently presented program of the Detroit Tuberculosis Exhibition. Spitting and sputum were repeatedly dwelt upon, along with the usual instructions concerning fresh air, sunlight and good food. But the grave menace of dust—the dust periodically stirred indoors by imperfect household practices, and the dust of poorly-cared-for city streets—was quite neglected. A lesson on dust and disease could be presented under no better auspices than with the public antituberculosis crusade, and the oversight of Detroit's public officials in this matter would have furnished a glaring example.

In a similar manner the public might have been aroused to the danger of the common fly, that ubiquitous household pest of the summer months which shows a special predilection for a diet of sputum or feces and follows it by a course of beefsteak or a bath in milk, and a promenade with frequent droppings over the dishes in which our food is prepared and served, or a more intimate contact with the surface of our bodies. It would surely have been profitable had it been pointed out that the tendency of recent investigation is to ascribe to the housefly a very important role in the transmission of tuberculosis, to say nothing of its deadly activities in other directions.

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Local anesthetics cannot be injected painlessly into tense, inflamed areas unless the injection is begun at a point in the skin well beyond the seat of inflammation.

## Book Notices

**Walter Reed and Yellow Fever.**—By H. A. Kelly, M. D., Professor of Gynecological Surgery, Johns Hopkins University. Cloth; 5½x7½ in., 293 pages, illustrated. Price \$1.50 net. New York, McClure, Phillips & Co., 1906.

A notable addition both to the history of medicine and to medical biography is this book by Doctor Kelly. To Walter Reed, the world owes the greatest medical discovery since that of anesthesia, but the public has been slow indeed to appreciate the true value of the discovery and backward in paying tribute to the discoverer. This is due to the ignorance of the people. Dr. Kelly says, "It is partly with the hope of aiding in the dissemination of the necessary knowledge that this little book is sent forth into the world, for I cannot but believe that if my countrymen only understand the subject in all its bearings, they will find some substantial means of testifying their gratitude to the man whose memory each and all of us should delight to honor."

The work of Reed in establishing the manner of inoculation of yellow fever and the means of preventing the spread of that pestilence, is well known to every medical man. With the story of his life, however, few are familiar. Doctor Kelly has told this picturesque story in such realistic words that one's attention is held from the first to the last chapter.

Walter Reed was born in Virginia in 1851. After taking his degree in medicine at the University of Virginia, he gained his clinical education in several hospitals in New York and Brooklyn. He practiced for five years, but having entered the profession some four years earlier than most men, he found success slow in coming. In one of his letters, Reed says: "It is a remarkable fact that a man's success during the first decade depends more upon his beard than his brains. \* \* \* Yet notwithstanding these many drawbacks, my success has been greater than I expected." Nevertheless, he resolved to enter the medical service of the army and in June, 1875, after passing a brilliant examination, he was commissioned as Assistant Surgeon.

The account of Dr. Reed's life on the frontier (1876-1891) as related by the author, is very interesting. In 1890, Dr. Reed was sent to Baltimore. The Pathological Department of the Johns Hopkins Hospital had been opened the previous year and while in Baltimore, Reed came under the magnetic influence of Professor William Welch—than whom no American has inspired more students. It was here that Dr. Reed gained the

scientific knowledge on which was afterwards based his research work.

After a short service in Dakota, Doctor Reed was stationed at Washington and made curator of the Army Museum. He was chairman of the committee appointed to investigate the epidemic of typhoid which broke out among the troops during the Spanish-American War. The other members were Dr. Vaughan, of Ann Arbor, and Dr. E. O. Shakespeare, of Philadelphia.

In 1891 the work on yellow fever began. Dr. Kelly gives a valuable review of the history of yellow fever and the work which had been done up to the time of the appointment of the commission. The officers composing the board were: Dr. Walter Reed, Dr. James Carroll, and Dr. Jesse W. Lazear, all non-immunes, and Dr. Aristides Agramonte, a Cuban immune.

The story of the mosquito work at the camp in Cuba, of the severe illness of Dr. Carroll and the sad death of Dr. Lazear are well told.

Dr. Reed died November 22, 1902, on the sixth day after an operation for appendicitis.

The happy style which has always made Dr. Kelly's scientific writings delightful lends itself well to a subject such as this. The book is more interesting than a novel and should be read and recommended by every physician.

**International Clinics.** Vol. II, Sixteenth Series, 1906. Cloth, 6½x9½ in., 302 pages, profusely illustrated. Price \$2.00. Philadelphia, J. B. Lippincott Co., 1906.

This well known publication has steadily improved both as to the quality of the papers and the mechanical work. The present volume contains 25 original articles by well known authorities. Twenty-eight plates, two being colored, and eighteen figures elucidate the text. The book is well worth the price.

**A Compend of Materia Medica, Therapeutics and Prescription Writing.**—By S. O. L. Potter, M. D., M. R. C. P. Cloth, 5x7 in., 291 pages. Price \$1.00. Philadelphia, P. Blakiston's Son & Co., 1906.

A compend on materia medica is more useful than one on any other subject, for one may find a forgotten point in a moment—and materia medica is made up of a huge conglomeration of forgotten points—at least so most of us feel.

This edition of the "little brown Potter" familiar to every medical student, has been brought up to date and contains a more hopeless array of facts than ever before. It is a good little desk book.



**The Eye and the Nervous System, Their Diagnostic Relations.**—By Various Authors. Edited by Wm. Campbell Posey, Professor of Ophthalmology at the Philadelphia Polyclinic, and Wm. G. Spiller, Professor of Neuro-Pathology at the University of Pennsylvania. Octavo. 800 pages. Thoroughly illustrated. Cloth, \$6.00. With 22 chapters by the leading specialists of the United States. Philadelphia, J. B. Lippincott Co., 1906.

Ocular phenomena constitute phases of so many disease-conditions that this subject must have interest for others than the oculist and neurologist though doubtless for these the chapters here written by a group of authors eminent in these specialties will have particular significance. The editors, Drs. Wm. Campbell Posey and Wm. G. Spiller, well comment upon the necessity to the ophthalmologist of a certain knowledge of neurology and the great service to the neurologist of at least an acquaintance with ophthalmology; but there is a large number from the rank and file of scholarly and thoughtful physicians to whom this book will appeal as of special interest.

As is almost inevitable, the chapters written by the oculist bear the unmistakable stamp of the dicta of him in whose mental vision the eye looms large above all else, while in those chapters upon the various diseases of the nervous system, facts pertaining to the neuron are written larger and clearer than those treating directly of ocular connection or phenomena, e. g., one may read here much of bulbar and pseudo-bulbar diseases, with only the barest mention of ocular involvement, and in other chapters by the neurological collaborators much is written which we commonly find in text-books upon the diseases of the nervous system and comparatively little upon ocular manifestations. If any criticism were to be offered, it would be this, that much is here written which is hardly necessary to even a clear discussion of the connection of the eye and nervous system and which therefore makes a book upon this special subject seem somewhat padded here and there.

Still the collaborators are able men who have given us between the covers of this book much that is of value and interest to the ophthalmologist, the neurologist and to the general practitioner who seeks to keep himself broadly informed.

The publisher's work is admirably done. Paper is good, print is clear and binding is most attractive.

**Human Sexuality, A Medico-Literary Treatise on the Laws Anomalies, and Relations of Sex.**—By J. Richardson Parks, M. D., late Acting Assistant Surgeon, U. S. A. Octavo, 476 pages, cloth. Price \$3.00. Philadelphia, Professional Publishing Co., 1906.

This work covers much the same ground as the various volumes of Havelock Ellis, but much that renders the latter books tedious has been omitted. Chapters are devoted to a consideration of the moral and social aspects of the sexual relation, sexual selection, betrothal, marriage and divorce, abortion and infanticide, the laws of sexual desire, inversion and perversion, artificial erotism, etc. These topics have been handled in a scientific manner and with a delicacy which has been lacking in similar books along the same line.

Every physician should have a certain amount of knowledge of the psychology of the sexual instinct and this book is apparently a reliable source of information on the subject. For this reason we recommend it. The book is well printed.

#### Books Received.

**Golden Rules of Surgery.** Aphorisms, Observations and Reflections on the Science and Art of Surgery. By Augustus Charles Bernays, A. M., M. D., St. Louis, The C. V. Mosby Medical Book Co., 1906.

**Walter Reed and Yellow Fever.** By H. A. Kelly, M. D. New York, McClure, Phillips & Co., 1906.

**International Clinics.** Vol. II., 16th Series. Philadelphia, J. B. Lippincott Co., 1906.

**Compend of Materia Medica, Therapeutics and Prescription Writing.** By S. O. L. Potter, M. D. Philadelphia, P. Blakiston's Son & Co., 1906.

**The Eye and the Nervous System, Their Diagnostic Relations.** Edited by W. G. Posey, M. D., and W. G. Spiller, M. D. Philadelphia, J. B. Lippincott Co., 1906.

**Transactions of the Utah State Medical Association.** Published by the Association. 1906.

**Non-Surgical Treatise on the Diseases of the Prostate Gland and Adnexa.** By George Whitfield Overall, A. B., M. D. Rowe Publishing Co.

**Clinical Bacteriology and Hematology for Practitioners.** By W. D. Emery, M. D., B. Sc. Philadelphia, P. Blakiston's Son & Co., 1906. (Review next month.)

**Prophylaxis and Treatment of Internal Diseases.** By Frederick Forsheimer, M. D. New York, D. Appleton & Co., 1906. (Review next month.)

## County Society News.

### Genesee.

The Genesee County Medical Society held its regular quarterly meeting at the Oak Grove Hospital, in Flint, on July 25th, and the afternoon was devoted to a clinic by Dr. George Dock, of Ann Arbor. He demonstrated the various methods of Physical Examination and discussed their value. It was one of the most successful meetings we have held in point of attendance and interest.

J. G. R. MANWARING, Sec'y.

### Grand Traverse.

Since the death of the former president of the Grand Traverse County Society, the officers are: President, I. A. Thompson; vice president, J. B. Martin; board of censors, F. Holdsworth, W. E. Moon and William Shilliday.

J. W. GAUNTLETT, Sec'y.

### Schoolcraft.

At the last meeting of the Schoolcraft County Society the following resolutions were unanimously passed:

*Whereas*, The office of medical examiner for life insurance requires a high degree of professional skill, absolute integrity and special care looking to the interests of both applicant for insurance and insurance company, and

*Whereas*, Certain of the old line life insurance companies have recently announced their intention of reducing the fee usually allowed to physicians acting as their medical examiners, and

*Whereas*, After due deliberation we find that a fee of less than five dollars (\$5.00) is not commensurate with the amount of work and care involved;

*Therefore, resolved*, (1) That we, the members of the Schoolcraft County Medical Society, on and after August 1, 1906, refuse to make any further examinations for all so-called "old line" life insurance companies for less than the regular fee of five dollars (\$5.00).

(2) That a copy of these resolutions be sent to the JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY, the *Journal of the American Medical Association* and a copy to each of the old line life

insurance companies doing business in this country.

G. M. LIVINGSTONE, Sec'y.

### St. Joseph

St. Joseph County Medical Society met at White Pigeon, Tuesday, July 17th. The meeting was held in the parlors of the Alba-Columbia Club. President Cameron was in the chair. The minutes of the previous meeting were read and approved.

Dr. Blanch Moore Haines gave an interesting account of the State Meeting.

Dr. F. W. Robinson presented the history of a case of Abscess of the Hip, under his treatment, which was discussed by Drs. S. R. Robinson, F. W. Robinson, Haines, Flanders and the President. A general discussion on peritonitis followed, and the Society adjourned to meet at Constantine in September.

The attendance at our meetings has not been what it should be, but the White Pigeon meeting has "renewed the hope that is within us."

JOHN R. WILLIAMS, Sec'y

### Tri County.

The regular meeting of the Tri County Medical Society was held in its rooms in Cadillac, on Friday evening, July 7th.

Dr. Louis Barth, of Grand Rapids, met with the society and after examining two patients that had been brought before the society, discussed Hodgkins disease, one of the cases having been pronounced to be such.

Dr. Barth brought with him from Grand Rapids, a man with a complete transposition of the organs of the chest and abdomen, as was clearly demonstrated. This was a very interesting subject as many had never before seen such a case.

Dr. Barth, who is a great traveler, brought with him many relics of the medicine men of the Indians, gathered in his travels through Arizona and New Mexico, and gave a very interesting talk on their habits and methods of using these various implements.

At the close of the meeting, a lunch was brought to the rooms and was well cared for by those present.

The next meeting will be held at Kalkaska.

W. B. WALLACE, Sec'y and Treas.

## WAYNE.

The officers of the Wayne County Society for 1906-7 are: President, J. Henry Carstens; vice president, W. F. Metcalf; secretary, Walter D. Ford.

The following letter has been sent to the members:

Dear Doctor:—When the meetings of the Society are resumed in September it will be the desire and effort of the officers to make the work of the year as instructive and profitable as possible.

It seems to your Program Committee that some systematic plan for the Society's meetings of the coming year would be desirable. In this way variety can be secured to an extent greater than if no plan for the year were made at the start. It is obvious, however, that such a plan should be kept flexible enough to provide for unforeseen needs and opportunities.

Your committee hopes to present a number of the papers in series, taking up such subjects as

Diseases of Respiratory System,

Diseases of Circulatory System.

Syphilis,

Tuberculosis,

Acute Infections,

Those having Gynecological or Obstetrical Significance.

Newer phases of Surgical work.

The first, third and fifth meetings of each month, according to the by-laws of the Society, are general meetings; the second meeting, medical; the fourth, surgical. It is planned to devote the third meeting of each month to some subject or subjects of general interest closely related to medicine, as a biographical sketch, or an account of medical matters in some other part of the world.

The above plan is, of course, open to change, and your suggestions for the improvement of it are solicited. Your committee hopes, however, that the plan may appeal to the members as an organized basis for making their contributions to the meetings of the Society. Please fill out enclosed postal as far as possible with reference to the proposed plan and return same.

The September program is already filled. Since the time is short before the year's work shall begin, it is very essential that the enclosed card be filled out and returned to the Program Committee without delay. If you will not read a paper, signify a choice of subject that you would be willing to discuss.

In short, identify yourself with the active work of the Society.

## PROGRAM COMMITTEE:

H. WELLINGTON YATES, Chairman,

1360 Fort St. West.

WILLIAM E. BLODGETT, Sec'y of Surg. Sect.,

312 Washington Arcade.

WALTER J. WILSON, JR., Sec'y Med. Sect.,

216 Theodore St.

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## Michigan Personals

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Dr. George M. Kline, of Ann Arbor, and Miss Ethel Fry, of Grand Rapids, were married on June 23.

Dr. George Dock, of Ann Arbor, was elected president of the American Association of Medical Librarians at a recent meeting in Boston.

At the annual meeting of the Alumni Association of the Jefferson Medical College, Dr. James H. Reed, of Battle Creek, was elected vice-president for Michigan. Dr. Reed is very anxious to hear from all Jefferson graduates in Michigan, as active steps are to be taken to bring about a reunion in all the states, territories and possessions of the United States.

Dr. Carl G. Zeidler, of Belleville, and Miss Harriet Fletcher, of Chelsea, were married July 5.

Dr. R. L. Clark, of Detroit, and Miss Prudence Chapman, of Walled Lake, were married July 11.

Dr. W. S. Mackenzie, of Munising, and Miss Warren, of Chicago, were married June 27.

Dr. C. B. Toms, of Big Bay, and Miss Cordelia La Rue, of Republic, were married June 27, at Marquette.

Dr. and Mrs. E. T. Tappey, of Detroit, are in Europe.

Dr. D. C. Howell, of Onaway; Dr. N. C. Monroe, of Millersburg; Dr. M. H. Nester, of Metz, and Dr. W. W. Ascot, of Rogers, have been appointed County Physicians of Presque Isle County.

Dr. R. C. Macgregor, of Saginaw, sailed for Europe on June 30. He will return early in September.

Dr. and Mrs. E. J. Marshall, of Marshall, have gone abroad for four months.

Dr. Earl M. McCoy and Miss Lulu Marion Smith were married in Grand Raids, July 6.

Dr. W. H. Lester, of Greenville, and Miss Effie Carroll were married, June 23, at Detroit.

Dr. John F. Hinks, U. of M., 1906, has been appointed house physician at the Jackson City Hospital.



Dr. T. P. Hanna has removed from Detroit to Romulus.

Dr. C. A. Crane, of Tawas City, and Miss Catharine Johnston, of Portsmouth, Ohio, were recently married at Portsmouth.

Dr. Stanley O. Newcomb and Miss Julia Snell, both of Ida, were married June 28.

Dr. L. R. Cobb and Miss Carrie Moon, both of Belleville, were married June 18.

Dr. J. B. Griswold, of Grand Rapids, has been elected commander of the Michigan G. A. R.

Dr. F. J. McDaniels, recently on the resident staff of Harper Hospital, has located in Alpena.

Dr. T. S. Conover, of Flint, and Dr. W. J. Conover, of Evart, are in Europe.

Dr. R. L. Kennedy, of Detroit, has been appointed Superintendent of the State Tuberculosis Sanitarium which, it is expected, will be ready for patients about January of the new year. Dr. Kennedy was graduated from the Detroit College of Medicine in 1898.

Dr. C. A. Wilbur, formerly of the State Health Department, has been appointed chief statistician for the division of vital statistics in the U. S. census bureau.

Dr. Glen W. Stockwell, of Detroit, and Miss Elizabeth Heron, of Toledo, were married June 18th.

Dr. W. H. Ditmars and Miss Anna Green, both of Jonesville, were married June 10.

Dr. Stripp and Dr. Carey, of the Michigan insane asylum, have resigned. Dr. Carey has accepted a professorship in a college in California and will leave on September 1. Dr. Stripp will practice somewhere in Michigan.

Dr. Elizabeth Morse, recently a member of the asylum staff at Pontiac, has resigned to accept an hospital position in Boston.

Dr. Walter den Blyker, Secretary of the Kalamazoo Academy of Medicine, and Miss Julia Marion Brownell, daughter of Mr. and Mrs. A. W. Brownell, of Kalamazoo, were married June 26th.

Dr. H. E. Rea and Miss Nellie Longwell, of West Branch, were married June 24.

Dr. Otto Scherer has been re-elected President of the Wayne County Superintendents of the Poor.

Dr. and Mrs. V. C. Vaughan are in Europe.

Dr. C. W. Yarrington, of Calumet, and Miss Bessie Kratz were married June 30.

At the recent meeting of the American Medico-Psychological Association, held in Boston, Dr. C. B. Burr, of Flint, the retiring president of the association, was elected to represent the society on the executive committee of the American Congress of Physicians and Surgeons, which holds its triennial meeting in Washington next year.

The subject of Dr. Burr's presidential address was "The Physician as a Character in Fiction."

## Deaths

Dr. O. T. Dales, of Grand Rapids, June 12.

Dr. J. B. Hoskin, of Grand Rapids, July 10.

Dr. Paul Sue, of Fenton, June 2.

Dr. J. E. Conlan, of Munith, June 30.

Dr. C. G. Towar, of Detroit, July 2.

Dr. W. G. Hare, of Bay City, June 19.

Dr. A. H. Holliday, president of the Grand Traverse Medical Society, died July 6. At a special meeting of the society, held July 6, appropriate resolutions were adopted.

Dr. George Chapman, for more than 40 years a resident and once mayor of Hudson, died July 29, aged 80.

Dr. James Clarke, of Bay City, died July 27, from cerebral hemorrhage.

Dr. G. H. Macpherson, of Fowler, died June 8, after a short illness.

Dr. Charles W. Isaminger, an enthusiastic member of the Alpena County Medical Society, died August 4, of cerebral hemorrhage.

## Correspondence.

Albion, Mich., August 20, 1906.

Editor of the JOURNAL:

Some time ago the JOURNAL contained a communication by Dr. Powers, of Battle Creek, telling of the work which is being done by the physicians in Calhoun County in exterminating the quacks. We are still after them; since the communication we have not been inactive, and several of the ilk have been driven from the county. We would like to hear that every county in the state had taken up this work, with the good laws we have now there is no reason why we should continue to let so many of these unprincipled swindlers prey upon the people.

Calhoun County Society has a committee with a member in each town who watch for all quacks and either warn them to get out or sign a complaint against them. The Society has incorporated itself and stands behind the action of the committee. What other Society shall we hear from first?

We want now information of one W. Thompson, whom we have a warrant out for. He sells remedies from a wagon, principally "Egyptian Oilio" (which is colored gasoline). He is of medium height, weight, etc., dark complexion, carries a company of four comedians and gives street entertainments. He is a very smooth talker. Last heard of in Windsor, Ont.

If any one can send information of him we will do the rest.

Yours fraternally,

GEORGE C. HAFFORD.

## Progress of Medical Science

### MEDICINE.

Conducted by

T. B. COOLEY, M. D.

**Stasis of Microscopic Particles as a Sign of Cancer of the Lesser Curvature.**—ZIEGLER has investigated the gastric contents in a number of cases of cancer of the lesser curvature, and compared the results with those obtained in other diseases which it is necessary to distinguish from cancer, such as subacidity, with and without gastritis, ulcer, etc. He finds that in cases of carcinoma, often long before any gross signs of stasis or any of the ordinary symptoms (hemorrhage, cachexia, glands, etc.) appear, there is always to be observed a stasis of microscopic food particles, starch, muscle fibers, and fat drops, often with clump of leucocytes, and invariably with Oppler's bacilli. This condition is present not only a few hours after the test meal, but the day after the food is ingested, and the bacilli are found after repeated washing of the stomach. This "microscopic stasis" is to be distinguished qualitatively as well as quantitatively from the macroscopic form, of which it is often not a forerunner. It is not found in any of the other diseases which need to be distinguished from early carcinoma, but appears when an ulcer undergoes carcinomatous change.

ZIEGLER's method of examination is to take some of the small particles of mucus which remain in the end of the stomach tube on withdrawal. These are similar in appearance to those found in normal or slightly catarrhal stomachs, and macroscopically show no food particles. Under the microscope, however, they show muscle fiber and fat, and with staining, starch granules and Oppler's bacilli—occasionally leucocytes. The bacilli are the most important, and are never absent, whatever the grade of acidity may be. The others may be absent at times, but all are sure to be found coincidentally on repeated examination.

ZIEGLER has been able to diagnose carcinoma of the lesser curvature in this way long before the appearance of any other positive signs, and believes the method to be of great value.—*Zeitschrift. f. klin. Med.*, Vol. 58, p. 499.

**The Blood in Children with Adenoid Vegetations.**—SCHEIER investigated this subject in 21 children who showed distinct symptoms (interference with nasal respiration or deafness) resulting from this condition. To appreciate his results it is necessary to state first the normal differences of the child's blood from that of the adult. The hemoglobin in childhood averages about 80% against 91.5% in adult life. The red corpuscles are about the same. The greatest difference is in the leucocytes. The neutrophile count is low in childhood, increasing gradually from about 22%

in the first six months to 63% at fifteen years. Small lymphocytes decrease from 65% to 28%, large lymphocytes from 9% to 5.1% in the same time, while eosinophiles do not vary much, averaging about 3.3%. The absolute number of leucocytes averages about 8,600 in children from 9 to 15 years, as against 7,680 for adults. In the 21 children examined the hemoglobin was invariably diminished, averaging 66.2%. The number of red corpuscles was not diminished. The absolute number of leucocytes was greatly increased, the greatest number being 23,000 and the average between 14,000 and 17,000. On differential count there was found in nearly every case a relative decrease in neutrophiles, and an increase of both large and small leucocytes. The eosinophiles showed no change. SCHEIER characterizes this blood condition as a mild grade of chlorosis with leucocytosis, especially lymphatic. All but four of the patients were examined also at intervals after operation. The hemoglobin percentage rose rapidly to near the normal, while the absolute number of leucocytes diminished even more rapidly, returning to practically normal in all but two. The relative proportions of the leucocytes also showed a rapid change toward the normal. It was noted that the children operated upon before being taken to a "summer colony" got much more benefit from their stay there than those whose adenoids had not been removed before their going.—*Zeitsche. für. klin. Med.*, Vol. 58, p. 336.

**The Diagnostic Value of Tuberculin in Infancy and Childhood.**—BINSWANGER calls attention to the much greater value of diagnostic tuberculin injections in childhood, and especially in infancy, than in adult life. There are two prominent reasons for this difference: First, "latent" tuberculosis practically does not occur in infancy, while in adult life a considerable proportion of the cases that react to tuberculin belongs to this class, and, second: the clinical course of tuberculosis is very different at the two ages. The tuberculous adult is one of a great majority, and his tuberculosis may be of any one of a number of kinds and of degrees of severity, while the tuberculous infant belong to a small, and always much endangered minority.

BINSWANGER analyzes in detail a large number of cases at the Dresden Infants' Home, showing that the injections are almost absolutely reliable. The average dose was 1 mg., though in special cases it was varied to from 1/10 to 5 or 10 milligrams.—*Arch. für. Kinderheilkunde*, Vol. 43, p. 110.



## SURGERY.

Conducted by

MAX BALLIN, M. D.

**Bacteriologic Investigations on Sterility of Operative Wounds.**—DOEDERLEIN has made bacteriologic examinations of the wounds during the course of 100 laparotomies. These investigations showed that it is impossible to keep the incision of the abdominal wall and the abdominal cavity, absolutely sterile, during the course of an operation—with the usual means adopted to prevent infection. The incised skin is the main source of infection, germs being freed from the deeper layers during the operation. To prevent this freeing of germs from the deeper cutaneous layers and the cutaneous glands, DOEDERLEIN prepares the skin as follows: The skin is shaved and washed with soap and water as usual. Then the whole region around the field of operation is rubbed with a solution of formaline in benzine or iodine in benzine (1:1000) and after this brushed with tincture of iodine to harden the skin. Over the iodine a sterilized solution of rubber in benzine (sold in Germany under the name of "gaudanin") is applied to the whole field of operation, and allowed to dry. Dusting the rubber coat with sterilized talcum will prevent it from being sticky. The thin rubber coat prevents the escape of germs from the skin during the operation. Numerous culture-tests have shown that incisions in skin prepared in this way are, and almost always stay sterile during the operation. The coat of rubber is afterwards easily removed with benzine.—*Transactions of the 35th Congress of the German Surgical Society*—Berlin, 1906—*Zentralblatt für Chirurgie*, 1906, No. 28.

**Prophylaxis and Treatment of Tetanus.**—Tetanus serum is only prophylactic and not of curative value. The preventive injections of serum, in cases of suspicious wounds, should be repeated after 10-14 days have elapsed, as the serum sometimes only delays and lessens the outbreak of tetanus, as the following report of a case will show: A workingman had his foot caught and badly lacerated in a machine. Prophylactic injection of tetanus serum was given 1 hour after the accident. Two weeks later he had spasms in the injured leg—general trismus and opisthotonus after three weeks ("ascending tetanus"). Death 39 days after the accident.—*C. Pochhammer-Griefwald. Ibid.*

**Spinal Anaesthesia After Injection of Scopolamin in Laparotomies.**—Spinal anesthesia alone has not proved to be very effectual in coeliotomies,

on account of discomfort caused by posture (Trendelenburg position) excitement of and disturbance by the patient, etc. KROENIG uses small doses of scopolamin-morphine to first get the patient in half-sleep. This proved sufficient in confinements; after delivery; the patient does not remember having had pain.

In operations the scopolamin-morphin sleep is supplemented by a spinal injection of stovain or cocain as follows: Two hours before the operation .0003 scopolamin (1/200 gr.)+.01 morphin (1/6 gr.) is given hypodermically; the injection is repeated after an hour. If the patient remembers things clearly after another hour, scopolamin alone .00015 (1/400 gr.) is injected. KROENIG never uses more than .0009 (3/200 gr.) of scopolamin and no more than .02 (1/3 gr.) of morphin.

All impressions on the mind of the patient are kept away, the eyes being covered by dark glasses and the ears being stuffed with cotton and covered with rubber plates. For spinal injection KROENIG uses stovain .008-.012 (1-1/3 gr. to 2 gr.). Most of the patients treated in this way slept quietly during the whole operation.

The main value of the method seems to show itself in the post-operative period. Of 160 patients (all women) operated under this anesthesia, 154 were free from nausea and vomiting. Fluids were given by mouth usually, a few hours after the operation. Post-operative bronchitis never occurred. Convalescence was remarkably quick. Headache was observed 12 times in these 160 cases. The operations included hysterectomies, vaginal and abdominal, operations on stomach and intestines, etc.—Kroenig—Freiburg i. Br., *Ibid.*

**Splenectomy for Banti's Disease.**—Banti's disease is characterized by tumor of the spleen, sclerotic changes in the lienal vein, certain kinds of anaemia, ascites and cirrhosis of the liver. The swelling of the spleen is the first symptom and preceeding the changes in the liver and the ascites. JAFFE has operated a case of Banti's disease, in the last stage, with immense ascites. Excision of the spleen improved the patient wonderfully, perhaps cured him, in spite of atrophic cirrhosis of the liver existing, as could be seen during the operation. JAFFE believes from this result that in certain cases of atrophic cirrhosis of the liver, splenectomy may be preferable to omentofixation (Talma's operation).—Jaffe—Posen—*Ibid.*



## GYNECOLOGY AND OBSTETRICS.

Conducted by

REUBEN PETERSON, M. D.

**Concerning Menstruation.**—OLIVER, of London, says, that despite the work which has been done on the subject, our knowledge of the mechanism of menstruation is still very meagre. We are entirely ignorant of its evolution and the study of the minute anatomy of the uterus is of little value because the relationships of structure and function are not always apparent.

Vicarious menstruation may be possible, but it is a very doubtful phenomenon. Because of epistaxis, hematemeses, etc., we must not assume that an important function of the uterus has been usurped by some other organ.

OLIVER discusses the marvelous regularity of menstruation, marvelous, because of the many disturbing circumstances incident to modern life.

The views of Heape, who holds that menstruation is a shedding of the mucosa, are considered at some length and controverted by OLIVER, who brings forth the following arguments against the theory.

(1) Menstruation often begins when the individual is asleep, yet the amount of blood then lost is not materially different from that when the same individual is walking about, a fact somewhat incomprehensible if the discharge is the outpouring of the contents of ruptured vessels.

(2) Female acrobats, engaged actively in their pursuits, lose neither more nor less than other women.

(3) In some cases, as in imperforate hymen, the discharge accumulates, even when there is considerable pressure. Such accumulation is compatible with a theory of secretion, for secretory pressure is a powerful force, but it is practically incompatible with the theory of capillary rupture. Stretched in this manner and bathed in this fluid, one can not believe that the epithelial lining could, month after month, undergo wholesale denudation and regeneration.

(4) Curettage of the uterus generally influences the course of menstruation but little. This would not be the case were the epithelium destroyed and regenerated every month.

(5) The mucosa is a highly resilient structure; if, however, it were periodically shed, its restraining influence would be so lessened that sub-mucous fibroids would make their way to the cavity of the uterus more rapidly and more commonly than is their wont. Evolution of these new growths is not thus effected, but results from a

gradual necrosis of the mucosa immediately overlying them, induced by vital pressure.

(6) Worry has a marked effect on the function. If the denudation theory is maintained, then these moods of the uterus are inexplicable. If, however, the menstrual fluid is a secretion, then the behavior of the uterus under these circumstances is intelligible.

(7) Menstruation immediately after ablation of the ovaries can better be explained as a nerve than as a vascular influence.

(8) In membranous dysmenorrhea the membrane may be cast off between periods. Therefore, the very occasional exfoliation in conjunction with menstruation is of little or no value as evidence corroborative of the denudation theory.—*N. Y. Med. Jour.*, Aug. 11, 1906.

**Syncytioma Malignum.**—HEWETSON relates a case of this disease and brings out some important clinical lessons from it. A patient began to have daily uterine hemorrhages in December, and was allowed to go until March when a curettment was done and the scrapings not saved. In May the uterus was found perforated and a broad ligament hematoma was opened. The tumor was allowed to grow in the broad ligament until finally (August) the author decided to operate. Inoperable chorioepithelioma was discovered. Autopsy on twentieth day, revealed secondary deposits in both lungs.

Judging from the published account, the case was very badly managed from beginning to end. This is admitted by the author who draws the following lessons from the case:

1. Metrorrhagia, following abortion or labor, should call for more prompt investigation, especially in women under thirty.

2. Dilatation and curetting, in such circumstances, is an operation of considerable responsibility, in view of the possibility of malignant disease.

3. Sharp curettes are contraindicated in the parturient uterus, and where septic infections exist.

4. All such curettings should be submitted to an expert pathologist for microscopical examination.

5. Continued metrorrhagia, after such treatment, should be regarded as of serious import, and should call for fresh investigation and prompt radical measures.—*The Practitioner*, August, 1906.

## PATHOLOGY AND BACTERIOLOGY

Conducted by

A. P. OHLMACHER, M. D.

**Spinal Extradural Inflammation in Cerebro-spinal Meningitis.**—R. PETERS invites attention to a condition which he has already described and for the discovery of which he claims priority. Extradural inflammation is the peculiar lesion, sometimes advanced to the stage of purulent pachymeningitis externa, again only recognizable through a hyperemia or edema of the extradural and perispinal tissues or even invisible except on microscopic examination. Evidence of subdural infection (leptomeningitis) may be present in various stages, or entirely absent. Examples of the latter class probably represent the anomalous cases in which striking spinal symptoms (rigidity and flexures of the spine and contractions of the limbs—the latter usually less extensive than in spinal leptomeningitis) have been noted with little or no anatomical evidence of leptomeningitis. In the reporter's thirteen cases the pneumococcus, alone or mixed (staphylococcus and streptococcus) was identified in ten, and the meningococcus in three. He believes that the spinal meninges are primarily affected, not secondarily from the cerebral sac; and that the infection is hematogenous in origin.—*Deut. med. Wochenschr.*, Nr. 29, 19 Juli, 1906.

**The Elastic Tissue of the Normal and Diseased Heart and Its Significance for the Diastole.**—With material composed of a large series of normal and pathologic hearts from individuals of varying ages, studied from the histological standpoint, FAHR finds that the muscle fibers perform the necessary functions of elasticity to the end of the first year of life. With increasing age and consequent demand upon the heart its muscular system alone cannot meet the demands for elasticity of the cardiac walls and elastic tissue makes its appearance arranged as a diffuse network around the muscle fibrils. When abnormal labor is thrown upon the heart by long-standing disease, as for instance, arteriosclerosis, the elastic tissue undergoes a compensatory increase especially pronounced in the muscle bundle beneath the aortic semilunar valves. Krehl's hypothesis of the particular function of the elastic tissue, the regaining of the diastolic attitude after the change in form characterizing the systole, is supported. This is especially the function of the elastic plates which traverse the muscle underlying the semilunar valves.—*Virchow's Archiv.*, Bd. 185, Heft 1, 1906.

**The Effect of the Streptococcus and Its Lysin When Introduced Per Os.**—The present study succeeds one of the same purpose in which the typhoid bacillus was employed by the author, TCHITCHKINE, and concerns the streptococcus. The administration of small doses of living streptococci per os into rabbits produces streptococcus septicemia and death in about half the cases. The same organisms in like dose introduced directly in the stomach of rabbits diminish by one-half the mortality as observed above. Cultures heated one hour at 45 deg. C. do not alter the result, but those heated to 50 deg. or 55 deg. are relatively less virulent and at 60 deg. become innocuous. In general, if not invariably, infection takes place in the first parts of the digestive tract (mouth, pharynx or esophagus) and probably by penetration through microscopic lesions of the mucous membrane. The intact mucosa of the intestine is an effectual barrier against streptococcic penetration, and infection through the bowel can only be presupposed on the basis of accidental lesion. Streptococcic hemolysin is inoffensive for rabbits when administered by the mouth, but the red corpuscles of rabbits which have ingested streptococci are somewhat more resistant to the hemolysin than those of the untreated rabbit. No active immunity against the streptococcus can be produced by feeding rabbits for sufficient periods with heated and unheated streptococcus cultures.—*Annales de l'Institut Pasteur*, Tome xx, No. 6, 1906.

**Unfavorable Results With an Antistreptococcic Serum.**—ZANGEMEISTER wished to satisfy himself as to the value of Aronson's antistreptococcic serum which he tested both by animal experimentation and clinically. The serum fulfilled the maker's claims so far as its protective value in rabbits was concerned. But when employed as a prophylactic preceeding abdominal operations in which there was reason to fear infection, the serum apparently was valueless. Thus in a series of 17 total abdominal hysterectomies mostly for extensive carcinoma 6 patients died in the post-operative period with septic peritonitis of varying extent, and streptococci were isolated from the infected wound or peritoneum in 5 of these. A protective dose of 20 or 30 c. cm. of Aronson's serum was administered at the time of operation. Zangemeister concludes that in its present form Aronson's antistreptococcic serum is useless as a therapeutic agent in man.—*Deut. med. Wochenschr.*, Jahrg. 32, Nr. 27, 1906.

## PHARMACOLOGY AND THERAPEUTICS

Conducted by

A. H. ROTH, M. D.

**The Action of Quinine Upon the Malarial Plasmodium.**—(Conclusions):

1. Quinine exercises an injurious effect upon the plasmodia of malaria during all stages of their human life-cycle, whether intracorporeal or extracorporeal, except when it is administered just prior to sporulation, at which time the sporulating body is not injured and sporulation occurs, but most of the spores are destroyed by the drug while they are free in the blood plasma.

2. The marked morphologic changes, degenerative in character, produced by quinine in all species of the malarial plasmodia, during all stages of their growth, prove that in order to secure the best therapeutic results, the drug should be continually present in the blood, and this is only possible when it is administered in divided doses at irregular intervals of time.—CRAIG, *American Medicine*, May, 1906.

**The Drug Treatment of Renal Disease.**—

The drugs really beneficial can be enumerated almost on the fingers of two hands. When once nitroglycerine with the nitrites, the iodides, iron, digitalis and strychnia are mentioned, much of what is beneficial has been brought forward.

The value of nitroglycerine is undoubted in the high-tensioned pulse condition in a contracted kidney. The failure in some cases to obtain results may be partly due to timidity in pushing the drug to its physiologic limits.

Immediate relief of the dyspnea of interstitial nephritis may often be obtained by the use of amyl nitrite.

The iodides are given by some with benefit—in theory they tend to check connective tissue formation.

When large doses of the tincture of the chloride of iron are given, the bowels must be carefully regulated. The form of iron best borne is Basham's mixture in half-ounce to ounce doses, or in the form of the tincture of citro-chloride.

For the heart, when edema develops, digitalis is of service. MATHEWS prefers the fat free tincture, some prefer the infusion.

Strychnia is sometimes valuable as a cardiac and respiratory tonic.

As to the value of morphia and its derivatives there is some difference of opinion. Osler and Rose Bradford advocate it in uremic convulsions and severe dyspnea, but Dickinson and Hare oppose its use.

When free watery movements are desired, sulphate of magnesia and elaterium are of use.

In uremic convulsions and coma, nitrite of

amyl, chloroform and nitroglycerine are of value. Chloral and the bromides may aid in controlling the convulsive seizures.

In the light of the recent researches on chloride elimination in nephritis, the use of salt solution is, to say the least, of doubtful therapeutic utility.—MATHEWS, *Providence Medical Journal*, 1906.

**The Bile Acids as a Remedy.**—CROFTON states that the bile acids may be employed with propriety in three conditions, all casually related to one another, namely, in intestinal putrefaction, in hepatic insufficiency and in gall-stone disease. The acids are best given in the form of the sodium salts, as the free acid may be irritating to the stomach. The dose varies according to the case. Usually one-half grain doses are given, frequently until the desired results are obtained. There is never any danger of giving too much, since the sodium glycolate in no way deranges the stomach, and if given in very large doses, produces a diarrhea which promptly carries off the surplus.—*New York Medical Journal*, April 21, 1906.

**Treatment of Splenic Anemia.**—BRAMWELL gives ferri carb. gr. 5, thrice daily and exposure of the splenic area once daily to X-rays.

The spleen diminished in size and the red count improved.

In another case, boric acid in 20 gr. doses with quinine hydrobromate, grs. 5, and tinct. ferri perchlor. min. 10, allayed the febrile symptoms, but did not diminish the spleen in size. The fall in temperature seemed to have some relation to the exhibition of boric acid.—*The Journal of Tropical Medicine*.

**Coley's Serum in Inoperable Sarcoma.**—The value of COLEY'S paper lies in the fact that he is able to give his final results. Thirty-six cases in which the tumor disappeared under treatment are reported.

In 26 cases the patients were well for periods varying from 3 to 13 years. In 5 cases a fatal recurrence took place after a well period varying from 6 months to 3¼ years.

In carcinoma the serum has merely an inhibitory but not a curative action. The serum consists of the toxins of the streptococcus of erysipelas, together with the toxins of the bacillus prodigeosus. COLEY appears to justify his claim that the serum injection should be used as a routine after all primary operations for sarcoma and carcinoma.—*Am. Jour. Med. Sciences*, March, 1906



## NEUROLOGY.

Conducted by

C. W. HITCHCOCK, M. D.

**The Examination of the Spinal Fluid in Dementia Paralytica.**—The columns of this journal, in a recent issue, contained a valuable article by Dr. Simpson of the staff of the Eastern Michigan Asylum, detailing his work in this same line.

BROOKS, of Buffalo, also reports his work of a similar nature. After describing his own technic and the gross results of his examination, he concludes, judging from their observation, that it is not yet possible to make a positive diagnosis of dementia paralytica from the cytological examination of the spinal fluid, but that the method bids fair to rank as a possible aid to diagnosis in some doubtful cases.

He finds it also of possible service in other conditions, as in the diagnosis of a case of meningeal syphilis, associated with meningitis, in which was found an increase both of lymphocytes and polynuclear leucocytes. In one case the diagnosis, which for weeks had been undetermined was thus established and led to the proper treatment.

BROOKS further concludes that with the withdrawal of not more than 5 c. c. of fluid (all that is necessary in any case) and the detention in bed of the patient for three or four days, the operation is attended with no danger, provided, of course, that reasonable asepsis is always maintained. In 38 punctures he had had no mishap nor seen any ill effect whatever.—*Med. Rec.*, June 30, 1906.

**Reception Hospitals for the Insane.**—A crying need in most of our large cities is some appropriately equipped hospital where cases of insanity may be received and detained, either pending commitment proceedings or, in some cases, for such short periods as may be necessary. Great injustice is not seldom done the unfortunate insane either by incarceration in unsuitable places such as jails and prisons, where there is lack of any suitable conditions for detention and treatment.

While this, of course, has not been wholly neglected in New York, a city which has done so much for its dependent classes, we are glad to see that its insane are to be still better temporarily provided for in a new Reception Hospital, the Board of Estimates and the Aldermen having authorized the purchase of desirable property between 73rd and 74th streets and overlooking the

East River, which will be leased to the State.—*Med. Rec.*, June 30, 1906.

**Trigeminal Nevi and Intracranial Hemorrhage.**—H. CUSHING, Baltimore, calls attention to a possible connection between congenital birthmarks in the facial region and spontaneous intracranial hemorrhages. Noting the topographical correspondence that often exists between these birthmarks and the distribution of branches of the fifth nerve, he remarks that there is much in favor of Baerensprung's idea that these nevi correspond with lesions occurring in the Gasserian ganglion. He reports three cases of such nevi in which certain complications occurred, due, as he interprets them, to the fact that the cutaneous lesion may be accompanied by a similar condition of vascularity of the dura mater which is sensitized by filaments from the same nerve. In the three children, all of whom were born with vascular nevi corresponding to branches of the fifth nerve, there occurred intracranial hemorrhages and convulsions, and in two of the cases contralateral spastic hemiplegia. In one of the cases which came to postmortem a notable fact was the smallness of the Gasserian ganglion and a meningeal nevus on the same side as the external one. The same condition of meningeal nevus existed in a second child who was operated on. In the review of the literature CUSHING has found one report, by Strominger, of a similar nevoid condition of the meninges leading to hemiplegia, associated with a facial cutaneous nevus in the trigeminal region of the same side. He sums up, in substance, as follows: Vascular nevi of the face have a tendency to correspond with the distribution of one or more main branches of the trigeminal. These cutaneous nevi may be associated with some degree of hypertrophy of the deeper tissues of the face, with an enlargement of the eye and also with a corresponding nevoid condition of the dura, which may lead to a spontaneous intracranial hemorrhage, with results similar to those of the subdural hemorrhages in infancy from other causes. Absorption of the clot may lead to cortico-dural adhesions, which, in favorable cases like the second one reported by him, can be separated with benefit as regards the convulsion, etc., provided measures such as carotid ligation are taken to prevent complications from hemorrhage.—*Jour. A. M. A.*, July 21, 1906.

## GENITO-URINARY SURGERY.

Conducted by

W. A. SPITZLEY, M. D.

**Diagnosis and Surgical Treatment of Tuberculosis of the Kidney.**—Tuberculosis as a distinct pathological process of the kidney was first described as early as 1767 by Morgagni; during the following century a number of observations of such a process were made; but it was not until 1883 that Bahe established the specific nature of the affection by finding the bacilli in the urine.

Both clinical and experimental evidence points to the hematogenous origin of tuberculosis of the kidney, the bacilli entering the circulation of the alimentary or respiratory tract; localization occurs where there are large quantities of blood, together with slowing of the current, namely, in the glomeruli. Traumatism frequently acts as a factor predisposing to localization. The progress of the disease is of course downward first to the pelvis of the kidney, then to the ureter and finally to the bladder.

The disease is essentially one of youth and early adult life and occurs more commonly in women than in men; but one kidney is usually involved except in those cases where general tuberculosis exists; then the disease is more often bilateral.

Many symptoms are mentioned as of diagnostic value; the author has found that in his experience the one that was present in almost every instance is vesical irritation. Frequent nocturnal urination was present in more than 90% of his cases; and in men a burning sensation in the perineum followed each urination. Hematuria was found in but one out of 17 cases; pain in four or five.

Absolute diagnosis is shown by the presence of tubercle bacilli; care must be taken not to confuse the smegma bacillus with the tubercle bacillus; and it is further necessary to determine that the tubercle bacilli come from the ureters and not, for instance, from the seminal vesicles; in other words, ureteral catheterization is an almost necessary aid in diagnosis.

Failure to find the germs does not necessarily mean that they are not present; in such instances, where the symptoms strongly point to the existence of the condition, guinea pig inoculation should be resorted to.

Medical treatment, except as demanded by co-existing lesions elsewhere, is of little or no value. In unilateral tubercular kidneys, nephrectomy should be done; in double involvement, effort should be made to determine which kidney is least involved and the worst one, of course, removed. In bilateral cases with large pyonephroses, nephrotomy is the proper mode of procedure. To insure the best results, as much of the involved ureter as possible should be removed; excision of part of the bladder wall does not promise much additional benefit—*LOWER, Surg. Gyn. and Ob., July, 1906.*

**The Treatment of Ectopia Vesicae.**—Operations which provide only for covering over the

defect in the abdominal wall are incomplete and inefficient in that they do not provide for the retention of the urine in the newly prepared receptacle except through the employment of some kind of a mechanical contrivance. The reason for using this mechanical aid lies in the fact that lateral tension is so great that no vesical sphincter can be made to hold; hence there is no anatomical structure to control the bladder contents.

In order to overcome this very great objection to the operation as it had previously been done, the author sought a way to relieve the lateral tension on the freshened edges of the defect. He found a method tending toward the accomplishment of that end by producing a bilateral separation of the sacro-iliac synchondrosis; this permitted a very complete approximation of the two halves of the pelvis at the symphysis, as well as a more perfect and less tense coaptation of the wound edges. The separation of the pelvic bones is attended with little danger in patients eight or less years of age. Where there is well marked diastasis at the symphysis, the primary separation at the back makes perfect approximation, anteriorly, possible; and the additional rest and fixation obtained in this way is of much importance as an aid to the healing process of the soft tissues. None of the author's cases has complete voluntary retention, when they are in the upright position, without the aid of a small pressure pad over the proximal end of the urethra; in the recumbent posture, voluntary control is nearly perfect, sometimes even throughout an entire night. Frequently, shortly after operation, control is perfect; later it is lost; this is due to the fact that the two sections of the pelvis reassume their former positions and the neck of the bladder and prostatic portions of the urethra are pulled upon to such an extent that the muscular ring (sphincter vesicae) can no longer be brought into play. In extreme epispadias or even partial ectopia, continence can usually be established by tightening the muscular ring through excision of a wedge-shaped section and suturing of the two sides.

It is particularly difficult to keep the bones at the symphysis together, the wire tending to cut out. Preliminary bandaging to the child, with a broad rubber band about the hips and pelvis, continued for a certain period daily during a sufficiently long time the author believes would be a most valuable preparation for later operation. This, supplemented by division at the back at the time of operation, would make it possible to bring together permanently the two halves of the pelvis in front and would convert the transversely placed oval defect of the abdominal wall into a narrow vertical slit; and in all probability one would then have the same satisfactory results as in the less severe types of the deformity.—*TRENDELENBURG, Annals of Surgery, August, 1906.*



## OPHTHALMOLOGY.

Conducted by

W. R. PARKER, M. D.

**Eye Affections Due to Autointoxication.**—

Autointoxications may be conveniently divided into the Histogenic and Enterogenic. Eye diseases due to the former class are fairly familiar to us, since they include those dependent on gout, diabetes, uraemia, chlorosis, Graves's disease, pregnancy, etc. But the latter class of intoxications has been much less studied, and of eye affections due to such, nothing is said in our text-books, while records of them in the clinical journals are very few indeed. ELSCHNIG has directed his attention to the subject for the last ten years and his paper is founded on cases occurring in his private practice during that period.

The recognition of gastro-intestinal autointoxication is perhaps not very easy. The most definite symptom of it is the presence of abnormal organic compounds, such as phenol and other ethereal sulphates, in the urine. The estimation of these bodies, however, hardly comes within the scope of every day urine testing, and a more practical indication is the presence of indican in increased amount in the urine. This, as a rule, means decomposition of albumin in the digestive tract, though it may also be present in fevers, chlorosis, leukaemia and neurasthenia. It is said not to be present in simple constipation.

It is the nervous apparatus of the eye, and the corneo-sclera and uvea which are especially prone to react to the gastro-intestinal toxins.

Nervous apparatus. It is recognized in text books of neurology that gastro-intestinal auto-intoxications may give rise to various paralyses of the internal and external eye organs; the symptoms are similar to those of (exogenic) ptomaine poisoning; the prognosis appears to be good only in the slighter cases. ELSCHNIG has one case of this nature to record:

A bank clerk, pale, dyspeptic, with offensive breath; not syphilitic. Disturbance of vision for a week. Right pupil half-wide, motionless; distant vision normal; punctum proximum 15 cm. with 3D (with the other eye 12 cm. without a glass). There was no indication of systemic nervous disease. The urine gave an increased indican reaction. The pupil and accommodation became normal under treatment directed to the digestive organs.

Optic nerve affections, due solely to this cause, seem to be very uncommon; but more than one writer has put forward the view that digestive disturbances may play an important though accessory part in the production of tobacco and alcoholic amblyopia.

As regards functional nervous affections. ELSCHNIG refers to cases of scintillating scotoma, as well as various neurasthenic symptoms, which seem to arise in connection with stomach troubles, chronic intestinal catarrh or constipation, and are dissipated when those conditions are treated; but he remarks that it must always be doubtful whether the symptoms are really due to auto-intoxication, or to reflex irritation from the digestive organs.

Affections of the corneo-sclera and uvea. A

man, aged 30, had suffered for several years from repeated attacks of superficial marginal ulcers of the cornea, some of them severe and accompanied by slight iritis. He had no general disease, nor could any local cause for the attacks be discovered in lids, conjunctiva, or nose. The urine gave an increased indican reaction, but was otherwise normal. Enquiry into his mode of life elicited the fact that with a sedentary occupation he combined great irregularity in his meals, and sometimes ate so voraciously as to produce vomiting. He suffered also from constipation. A diet cure, undertaken in the summer of 1903, had a considerable effect in diminishing the attacks, but with a return to his former habits of life they recurred, until, in March, 1905, his doctor instituted a strict dietetic regime, and since that date he has had no more attacks of keratitis.

That relapsing scleritis, in the great majority of cases, owes its origin to digestive disturbance, seems to ELSCHNIG indubitable. He has seen no case in which acquired syphilis could be demonstrated as the cause of the affection; no case in which, even though certain signs suggestive of hereditary syphilis were present, antisiphilic treatment produced any appreciable effect on its course. The only general treatment, which in severe cases has produced any amelioration, either in the attack itself or in the tendency to recurrence, has been one founded on regulation of the diet and repeated disinfection of the digestive canal.

What is true of the deeper forms is also true of the rarer superficial type, or episcleritis periodica fugax.

The gastro-intestinal factor is of still more moment in certain affections of the uveal tract, and there are in particular two forms of iridocyclitis in which an autointoxication may be confidently looked for, either as the sole, or as an important accessory cause. The first occurs especially in women, and is characterised by a chronic course, deposits in the anterior chamber, and opacities in the vitreous. The patients give the history of constant digestive irregularities and constipation. An acetone-like odor of the breath and the presence of indican in the urine point to the presence of toxins of intestinal origin; and a therapeusis directed towards the digestive troubles is the only one which influences the ocular condition for the better.

The second form is a recurrent iritis; the subjects of it are apparently quite healthy individuals, often men about the middle period of life; one eye is attacked by acute iridocyclitis, recovers, and after a longer or shorter interval, a second attack occurs, and this process is repeated until in many cases, the eye becomes blind. Antisiphilic remedies are not of the slightest use, but, on the other hand, treatment of the digestive organs produced complete arrest of the process in five out of seven cases, and in the other two, in which it was very imperfectly carried out, there was considerable amelioration.—*Klin. Monat. f. Auf.*, Nov 1905.



## RADIOGRAPHY AND ACTINOTHERAPY

Conducted by

H. R. VARNEY, M. D.

**A Modification of Benoist's Penetrameter.**—PHALER considers the lack of methods for exact measurement of the Roentgen ray, one of its greatest drawbacks for use in medicine and surgery. Because the terms "soft," "hard," or "medium," as applied to tubes, depend upon the operator who is using them, this means of designation is unreliable and inaccurate.

Because the resistance of tubes varies independently of the vacuum or the quality of the rays, estimating their penetrating power by measuring the parallel spark-gap is also unreliable.

Most uniform in its application has been the use of the hand and its shadows upon the fluoroscope; this however on account of its serious results to the hands of the radiologist, is wholly impractical.

To Benoist is due the most valuable device, of the present day, for estimating the quality of rays given off by each tube. This scale measures either the penetrating power, or the quality of the ray. The writer has termed the Benoist scale a "penetrameter," a term that he considers less confusing than "radio-chronometer," because of its similarity to the term "chromoradiometer" (Holzknecht).

The writer has modified this apparatus so as to overcome its two serious objections: First, he has so arranged it that it can be read while the tube is being used for application of the ray, and second, he has overcome the danger to the operator, while reading it.—*Arch. of Physiolog. Therapy*, June, 1906.

**Notes on the Use of the Milliampere Meter in X-Ray Measurements.**—JONES states that no one who has used a milliampere meter for regular work, will doubt its value in the measurement of the workings of an X-ray tube. Many practical workers however doubt its accuracy. The writer states also that the questions to be settled before the milliampere meter can be accepted as reliable are as follows:

1. Does X-ray production bear a direct relation to the magnitude of the current through the tube? This question is of prime importance and has not yet been fully answered.

2. What difference may be expected to exist between the amount of X-ray produced within the tube and the amount actually emitted and available for use outside?

3. Can the milliampere meter be trusted to

give a measure of that part of the current which is concerned in the production of the X-ray, and that part only?

4. How may the reading be interpreted to suit different distances of the radiant points from the surface radiated?

In reply to the first question, the writer says that if the vacuums of all tubes were equal, then the measurements would be of value.

In considering the second question, he says the milliampere is of no value, as it is impossible to know the magnitude of the ray produced as compared with the amount available for use outside. Holtzknecht, Sabourand, and others have taken this factor into consideration in devising their color indicators which are extremely sensitive to the action of the ray and determine the activity of the individual tube, by slight changes in color.

The third question, he answers in the affirmative.

The fourth question is readily answered, for it involves only the measurement of the distance from the anti-cathode to the skin surface.—*Arch. of the Roentgen Ray*, June, 1906.

**A Simple Penetrameter.**—Because of the danger to the hand of the operator which results from the constant use of it to test the quality of the rays, a substitute which is both inexpensive and practical, has been suggested by SCHILLING. A skeleton hand has been fitted into a glove, the glove then filled out with wax. At the wrist, a handle can be adjusted, and this protected by a curved piece of lead.

The wax substitutes the fleshy part of the hand, and casts a like shadow, while the bones are identical.—SCHILLING, *Fortsch. auf dem Geb. der Roentgenstr.*, March, 1906.

**Roentgen Therapy in White Swelling and Bone Tuberculosis.**—REDARD reports rapid cures in chronic tuberculous osteitis by the Roentgen rays when the lesions are superficial. Deep lesions are less favorable, as Potts disease and hip disease; yet local improvement is noticed.

The writer states this is true even where there is a sinus and that ankylosis is less liable to occur because of the stimulation of the light which favors the production of fibrous tissue.

When possible he attacks the lesion from several sides.—*Arch. of Electric Medicine*, Feb., 1906.

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## Original Articles

### THE POSSIBILITIES AND LIMITATIONS OF LABORATORY DIAGNOSIS.\*

JOSEPH SILL, M. D.  
Detroit.

Medicine has become so large a subject that no one can master the whole of it. To avoid a mere superficial knowledge of a large subject, each one of us, consciously or unconsciously, devotes his best energy and attention to the mastery of one of its smaller divisions. We may call ourselves general practitioners if we will, but I think each of us here tonight will admit that there is one department of medicine in which he is especially interested, and that there are certain kinds of cases which he does not consider himself competent to care for.

Specialism is today necessary for progress, and, consciously or unconsciously, each one of us is a specialist. This is all very well and entirely proper, but it has its drawbacks. Specialism means narrowness, and each gain in special knowledge is bought with a loss of general informa-

tion. What we gain in depth we lose in breadth, and as we dig deeper in our own little field of knowledge our horizon narrows, until finally we see but indistinctly beyond our own circle of interest. I believe that every one engaged in special work feels his narrowness, feels that each gain in special skill and knowledge is paid for by an equivalent loss along other lines; but I think that on account of the peculiar character of my own work, this feeling is brought home to me with special force. The line is more sharply drawn between laboratory medicine and clinical medicine than between any of the clinical specialties. An example will show what I mean. You are attending a case of appendicitis. You call a surgeon to operate. He goes with you, examines the patient, learns all the details of the past history and present condition, and forms his judgment, taking all these points into consideration. You send the laboratory

\*Read before the Wayne County Medical Society, November 13, 1905.

man to this same patient to make an examination of the blood. He goes to the bedside, obtains his material, goes back to his laboratory and makes the examination, knowing nothing more of the patient than he can see through his microscope. In a sense he is working in the dark. The line that separates him from the clinician is a far broader one than that separating the internist from the surgeon. The laboratory worker makes many examinations and sees many pathologic conditions, but only rarely has he an opportunity to correlate his findings with clinical conditions. He is seldom able to fit the results of his examination into the picture of the disease from which the patient is suffering, and that is the only way the report of a laboratory examination can be properly interpreted.

Feeling this incompleteness of my own work, if I have one medical hobby it is what might be called "Co-operation in Medicine." This co-operation is largely absent, especially in the relations of the clinician and laboratory man. This is not due to any feeling of hostility between them, but largely to a lack of appreciation of the limitations and possibilities of laboratory diagnosis.

In order to bring about co-operation of this kind, it is necessary for the clinician and the laboratory man to realize that each can help the other in his work. Without the aid of the clinician, without the opportunity that comes from this aid to correlate his laboratory findings with bedside conditions, the work of the laboratory man becomes merely a matter of manual dexterity. Without the knowledge of the patient's condition, the laboratory man must make his report a bare recital of microscopic or chemic findings,

and the report loses half its value to the clinician.

In order to get the best from the laboratory, it is necessary to know its possibilities and limitations, and it is about these that I wish to talk tonight. First, I will discuss them in a general way, then take up some special instances.

How can the laboratory aid the clinician? It can give him accurate knowledge of the condition of the tissues and fluids of the body, of its secretions and excretions, and of adventitious exudates and discharges. This, I think, covers the present field of clinical laboratory work. The laboratory cannot, except in the rarest instances, make diagnoses for the clinician. Just as there are few pathognomic signs and symptoms, so there are few diagnostic laboratory examinations. This, of course, is disappointing and is far from what was fondly hoped when laboratory methods of diagnosis first came into use. Every discovery, every advance in therapeutics, is at first valued at a premium. How often the test of experience discounts this value! A recent example is the Roentgen ray. How far its therapeutic value has fallen short of the hopes of enthusiasts! Yet no one will deny it a place, and an important place, in medical practice, and as we become more and more familiar with the X-ray, what new uses, not dreamed of by its early advocates, are found for it!

So it is with laboratory methods. While many claims have been shown to be extravagant, still as our knowledge of physiological chemistry, of pathology and of bacteriology advances, new possibilities are opened up and new methods devised which gradually reach their true level of value and become established procedures.



And right here the importance of co-operation between the clinician and laboratory man becomes apparent. In order to get the best out of the laboratory, the clinician should remember that his laboratory man is doing clinical work; that he is not solving unknowns. A bare specimen without any indication of its character, or what is wanted by the physician sending it, is of little value. Frequently specimens are sent to me unaccompanied by any information, of whose character I have not the slightest idea. An example will illustrate my meaning. Recently a jar was sent to me containing material which, from its appearance, might have been stomach contents, feces, or curettings in formalin. What should I do with it? Treat it as curettings, stomach contents, or feces? The examination required for any one of the three is entirely different from that required for either of the other two. If I guess wrong, I not only make a useless examination, but ruin the material for the examination wanted. After considerable delay I reached the physician by telephone and found out that the specimen was feces and that he suspected malignant disease of the rectum and wanted to know if the specimen contained any material from which the condition could be diagnosed. Now granting that I had guessed right and considered the specimen to be feces, how could I tell that it was to be examined for carcinoma and not for tubercle bacilli, or in some other way? I do not know: perhaps some one can tell me.

In this particular instance, the lack of information was accidental. The physician had intended to give me the desired information, but in the press of work, he had forgotten to do so. Others fail, not

because they are unwilling to give the information, but because the necessity of it is not apparent to them. I remember one specimen that came to me without sufficient data. I asked the attending physician for the missing information, and was told that he had purposely withheld it because he thought by so doing he would get a more unbiased report. I am sure no personal affront was intended, but I think that such an attitude is unpardonable. Such lack of confidence on the part of the clinician in the fairness and judgment of the laboratory man puts the latter in a position unfair to both. The more we know of material sent to us, of the conditions under which it was obtained, of the past history and present condition of the patient, the more information can we derive from examination of that specimen.

To leave generalities and to mention a few specific instances of the laboratory's possibilities and limitations, I will speak first of urinary analysis.

The examination of the urine is one of the most useful and common clinical examinations, and while the laboratory man can make an examination satisfactory to the physician with perhaps less knowledge of the patient than is required for almost any other, still there is a limit to his abilities in this case. For example, I have occasionally sent a report on a urine containing a faint trace of albumin, an occasional hyaline cast and a few pus cells to the physician, and have been asked: "What is your diagnosis?" I have to answer his question by asking another: "What is the matter with the patient?" I cannot tell the significance of an occasional hyaline cast when I know nothing of the condition of the patient. It

has been shown that an occasional hyaline cast is frequently found in the urine of a perfectly healthy person. On the other hand, the appearance of a few hyalines may be the first sign of danger, or may point to the clearing up of a condition that has been serious. I cannot tell what the urinary findings mean, unless I know the condition and previous history of the patient. This brings me back to the point I made a few moments ago, that the laboratory report, by itself, is rarely diagnostic, but must be fitted into the picture of the disease to be properly interpreted.

Another point I should like to make in regard to urinary analysis is the value of 24-hour specimens and of quantitative examinations of urinary constituents.

In the first place, the quantity of the urine varies from time to time during the day. During the hours of exercise and during digestion the work thrown on the kidneys is greater than during the hours of rest and fasting; therefore, if the amount of work the kidneys are doing is to be determined, conclusions based on a single sample will be erroneous, due to the normal variations of solids excreted at various times of the day. If the mere presence of abnormal substances in the urine is to be determined, the sample should be taken at the time when the kidney is doing its hardest work, i. e., during the hours of exercise, a few hours after the heartiest meal of the day, because when the kidney is working hardest, abnormal substances will be likely to be present in greatest abundance. Inasmuch as the kidney is doing its least work early in the morning, the early morning specimen is the poorest

for examination, not the best, as is generally supposed.

In general, quantitative estimations of urinary solids are worthless unless the 24-hour amount is known. What one wants to learn from quantitative estimations is the daily excretion of urinary constituents, as urea, albumin or sugar. Percentages give no idea of the daily excretion.

For example, I recently examined a urine which contained 6.5 per cent. of sugar. A few days later the same urine contained 7.5 per cent. This was an apparent increase. However, on the first occasion the patient passed 5200 c. c. in 24 hours, making the excretion of sugar 338 grams. On the second occasion, the 24 hours' quantity was 4300 c. c., making the excretion 322.5 grams—a decrease in the sugar excretion in spite of the increase in percentage.

I have grave doubts of the value of single urea estimations. The amount of nitrogen excreted by the kidneys is dependent on too many factors for very definite conclusions to be drawn from a single estimation. The amount of nitrogenous food taken in and the amount of nitrogen excreted in the feces and sweat must all be considered. I cannot, however, subscribe to the opinion that urea estimations are valueless. While it has been pretty definitely shown that retention of urea is not of itself the cause of uremia, and that a faulty excretion of urea is not proof that the kidney is failing to properly excrete other solids, ordinarily uremia is accompanied by a decreased amount of urea in the urine and a urea excretion constantly below the normal average should be considered a sign of danger.

I do not believe that the estimation of the daily excretion of uric acid is, in the present state of our knowledge, of any value whatever. Haig's writings on uric acid have had a wide influence in the profession, but it has been shown that his experiments were faulty, his results erroneous, and that there are many factors to be considered which he left out of consideration. I do not believe that we know enough concerning the formation of uric acid in the body and its excretion from the body to make his urea-uric acid ratio of any clinical value.

Albumin percentages are likely to be deceptive. We have two ways of expressing the percentage of albumin present in a urine: percentage by bulk and percentage by weight. By bulk percentage, I mean that proportion of the volume of the urine occupied by the precipitated albumin after it has been packed as closely as possible by centrifugalization. This bulk percentage may be very large, running sometimes up to 30 or 40 per cent. By weight percentage, I mean weight of the precipitated albumin compared with the weight of urine from which it has been precipitated. This percentage by weight represents the actual amount of albumin in 100 c.c. of urine. The weight percentage is to the bulk percentage as 1 is to 60. Thirty per cent. of albumin by bulk would be really only 0.5 per cent, or 0.5 gram in 100 grams of urine. One per cent. of albumin by weight in a urine is a very large amount. It is sufficient to make the urine boil solid. I have never seen a urine containing as much albumin as this. When we remember that white of egg contains only about 10 per cent. albumin we realize that the enormous percentages

of albumin sometimes reported are impossibilities.

In bacteriologic diagnosis it is almost always necessary for the examiner to know something of the patient's history and condition and of the conditions under which the material for examination was obtained. The identification of bacteria is frequently a long process impractical for clinical work. When a physician sends material for bacteriologic examination to the laboratory he wants a report within a reasonable time. He cannot afford to wait weeks or months for a report, and he cannot afford to pay for a long series of experiments. This reduces the bacteriologist to a few simple procedures for identification of the bacteria he is dealing with. These are: (1) source; (2) morphology of the organism; (3) motility; (4) reaction to special stains; (5) appearance of the growth on the ordinary culture media.

It is of the utmost importance to know the source of the material sent for examination. Of course, in certain cases this is self-evident. A sputum is a sputum, and can ordinarily be recognized, although I have received material I could not identify, which proved to be sputum.

It is important, for example, to know whether pus comes from the urethra, the abdominal cavity, or from some exposed surface of the body, for we expect a different class of micro-organism in these three locations. It is important to know whether an exudate comes from the abdominal or the pleural cavity.

It is also necessary to know the present condition and past history of the patient, or at least to know what the physician suspects. The technic of the examina-



tion for tubercle bacilli, for example, is entirely different from the technic of the examination for gonococci. It is impossible for the laboratory man to make all possible examinations in the hope of making the one that the physician wants.

Even with all available data at hand, it is sometimes impossible to positively identify bacteria found. For example, the gonococcus has certain characteristics of morphology, staining properties and position in the pus cells. There are, however, other bacteria that possess one of all of these characteristics.

This is especially true in urine. There may be several bacteria present in the urine having the morphology and staining properties of the gonococcus. This makes the examination of the urine for gonococci very unsatisfactory. There may be bacteria in the urethra possessing all the characteristics of the gonococcus I have mentioned, i. e., morphology, staining properties and intra-cellular position. They do not, however, produce the clinical condition known as gonorrhea. The microscopist cannot, therefore, positively report gonococci. He can only say that the microscopic appearances are typical of the gonococcus, and leave it to the clinician to determine whether or not the history and condition of the patient are consistent with the presence of the gonococcus.

The same difficulty is encountered in distinguishing the typhoid bacillus from the colon bacillus. These two bacteria have the same reaction to special stains, are similar in morphology, and the appearance of the growth on the ordinary culture media is much alike. I do not mean to say that there are no differences. The typhoid bacillus is more slender and

motile than the colon bacillus, but in any given instance we are confronted with the question: "Have we an unusually slender and motile colon bacillus, or an unusually thick and sluggish typhoid bacillus?" The growth of the colon bacillus on the ordinary media is heavier than that of the typhoid bacillus, but in every special case we must ask ourselves: "Is this a luxuriantly growing typhoid bacillus or a poorly growing colon bacillus?" The question is further complicated by the existence of a large number of bacteria, the so-called para-typhoids and para-colons, which closely resemble both. Under these circumstances, it is impossible to do more than make a probable diagnosis, and to do even this we need all available data at hand.

The examination of sputum for tubercle is comparatively simple, and the possibility of the presence of other bacteria resembling them is so small that if bacteria resembling the tubercle bacillus are found the microscopic diagnosis can be made with reasonable certainty.

In examinations of urine for tubercle bacilli the case is far different. The smegma bacillus must always be reckoned with. Recent work by Young and Churchman seems to show that differential stains are not to be relied on in distinguishing the tubercle from the smegma bacillus. According to their work, the smegma bacillus is never found back of the cut off muscle. They advise before collecting urine for examination for tubercle bacilli that the glans penis be thoroughly cleansed, and that the anterior urethra be thoroughly irrigated with some bland fluid, not with the idea of sterilization but because a copious irrigation will wash the anterior urethra free from any-

thing that would be carried along by the stream of urine. They believe that in this way urine suitable for examination for tubercle bacilli can be obtained. Their work was done entirely with men. If urine for examination is to be obtained from a woman I would suggest a careful cleansing of the vulva and meatus of the urethra, and the withdrawal of the urine by means of a sterile catheter.

Tubercle bacilli are rarely found microscopically in the discharge from tuberculous abscesses or sinuses. Curettings from the abscess or sinus wall should be sent, and search should be made for the histologic changes characteristic of tuberculosis rather than for the tubercle bacilli themselves.

The Widal agglutination test for typhoid fever, while usually satisfactory, is sometimes unsatisfactory. This is due to two causes: Different cultures of the typhoid bacillus possess different agglutinating power, and the time of the appearance of the agglutinins in the blood of typhoid fever patients is variable, rarely appearing before the end of the first week. Therefore, one should never be disturbed in a diagnosis of typhoid fever made on good clinical grounds, and in the doubtful cases should not be satisfied with a single test.

The examination of the blood is a field that has been full of information, although some of the expectations of the early workers have not been fulfilled. It was at first thought that many diseases would be diagnosed by blood examinations. This is true in a limited number of cases, but the information to be gained by blood examinations has steadily increased as our knowledge of the blood

and the technic of its examination have advanced.

Pernicious anemia, the leukemias and malaria are striking instances of diseases which may be diagnosed by blood examinations, but such diseases are few in number.

The general information which may be gained from blood examinations is often great. Is the patient anemic? If so, how anemic? Is a leucocytosis present? If so, what is its character? All these questions may be answered and may be of great importance to the clinician in making his diagnosis or prognosis, or in mapping out his course of treatment. The causes producing an anemia or a leucocytosis are many, and in order to determine its significance the history and condition of the patient must be known. For example, a hemorrhage will cause an anemia as well as lack of hydrochloric acid in the gastric juice. A pneumonia will cause a leucocytosis as well as a pus pocket. I have no doubt the reports of blood examinations often seem indefinite and little to the point, but unless we know the condition of the patient, the best we can do is to report our findings and leave their interpretation to the clinician.

An instance of the value of a blood examination which, in itself, was not at all diagnostic, occurs to me. In the summer of 1904, a physician called me by telephone and said that he had a patient suffering from some obscure symptoms, that the man had been treated by several physicians without improvement, that he was anxious to make a diagnosis and suspected some blood parasite, mentioning that of Rocky Mountain fever as probable. I examined the blood, found evidence of concentration of the blood rather than

any anemia. I was able to find no parasites. I telephoned my report to the physician, who was distinctly disappointed. He said that it was of little value to him and that what he wanted was a diagnosis. I found that the patient had just returned from South America and that he had a dysentery. The only condition which I thought could explain the dysentery, weakness and concentration of blood was some form of intestinal parasite. I obtained some fresh feces, examined them on a warm stage, and found numerous amebæ. In this instance the first thing that made me suspect the possibility of an intestinal parasite was the blood picture. Then, finding that the history and condition of the patient warranted such a diagnosis, I suggested an examination of the feces.

The examination of gastric contents gives valuable information to the clinician. In order to draw correct conclusions from the examination it is necessary to know the character and amount of the test breakfast and the length of time that has elapsed from ingestion of the meal to the withdrawing—for all these things have an influence on the conditions found.

The clinical examination of breast milk is frequently of importance. The first question that occurs to the physician, if the baby fails to gain in weight, or if there are evidences of faulty digestion, is: "Is the breast milk normal in quantity and quality?" The question of quality is to be determined by examination. For this purpose it is important to have either the middle portion of the milking, or, better, the entire milking from one breast. The first portion of milk drawn is relatively richer in proteids and poorer in

fat, and the last portion is poor in proteid and rich in fat.

In examinations of tissue and curettings, knowledge of the patient's condition is frequently important. It is of the utmost importance for the pathologist to know from what part of the body, a piece of tissue comes, and it is also important that the amount of tissue sent be sufficient for him to get an idea of the arrangement of the cellular elements and their relation to other structures and to each other. A bit of tissue as big as a pin head is almost useless for pathologic examinations. The pathologist makes his diagnosis as much from the arrangement of the cells and their relations as from the character of the cells themselves. It is practically impossible for him to distinguish a cancer cell from other epithelial cells unless he can see its arrangement in the tissue and the relation to the other kinds of tissue present.

It is also important that the tissue is not allowed to dry up or decompose before it reaches the pathologist's hands. Tissue to be used for examination should be placed at once in 4 per cent formalin.

A recent instance of the necessity of the pathologist's knowing the condition of the patient occurred only a few weeks ago. A piece of tissue was sent for examination. A report was made that while the tissue changes were not characteristic, they were very suspicious of malignancy. The attending physician then talked the case over with the pathologist, and a consideration of the patient's past history and present condition, together with the histologic findings, made it practically certain that the condition was specific and not malignant. This is only a



single instance of what is occurring frequently.

In this brief discussion of the possibilities and limitations of laboratory diagnosis it may be that I have dwelt on the limitations more than on its possibilities. This is by no means because I think the laboratory is not of great use to the clinician, but because I think that confession is good for the soul and that the very worst policy for one who has the advancement of his own work at heart is to pretend to do what he knows he cannot do.

What, then, are the possibilities of laboratory diagnosis? The laboratory can give to the clinician many aids in making his diagnosis. Examinations of the urine, blood, or other fluids, secretions and excretions of the body frequently will swing the weight of evidence from one side of the balance to the other and determine a doubtful diagnosis. Frequently with a diagnosis made, exact information gained from the laboratory will be of great value for prognosis or will suggest important modifications of treatment.

What are the limitations of laboratory diagnosis? The laboratory cannot, except in a few instances, make diagnoses for

the clinician. The more complete the co-operation between the clinician and laboratory man is, the more information can the worker in the laboratory give the practising physician, and with increasing opportunity to correlate laboratory findings with clinical conditions will come an increasing ability to determine the significance of pathologic changes in a given case.

Co-operation will do this for the clinician. It will broaden the scope of laboratory diagnosis, increase its possibilities and wipe out many of its present limitations, and it will make the laboratory worker more and more of a laboratory diagnostician and less and less of a mere technical expert with the test tube and microscope.

The clinician and the laboratory worker can never clash. The clinician has no time to spend with the details of laboratory technic, and the laboratory man becomes, by the very nature of his work, unfitted to treat patients. The benefit of a hearty and intelligent co-operation will be to the advantage of one as much as to the other.

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Pyuria without symptoms is suspicious of an early tuberculosis of the urinary tract.

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When cleansing the vagina and vulva in preparation for an operation, a soft cotton mop should be used for the vestibule; a stiff brush is too apt to bruise or lacerate the urethra and cause dysuria for some days thereafter.

Frontal sinus suppuration rarely requires a disfiguring operation for its relief. It can usually be satisfactorily drained through a small opening in the line of the eyebrow, internal to the supra-orbital nerve, the (fenestrated) drainage tube being carried into the nose.

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Grocers' paper bags are well-adapted receptacles for soiled dressings.

## PHYSICAL DISTURBANCES IN DISTANT PARTS OF THE BODY DUE TO EYE-STRAIN \*

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J. G. HUIZINGA, M. D.

Grand Rapids.

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Dr. Geo. M. Gould<sup>1</sup> has, in his usual unique way, awakened the profession to the fact that the relation of eye-strain to disturbances in different parts of the body is not sufficiently well known or considered. In one of his articles, he successfully proves that this subject has received only the most meager attention at the hands of the medical literateur, and not unnaturally draws the conclusion that the profession must be quite ignorant of such relationship.

When a person has been thoroughly familiar with certain facts, and has publicly taught them for something more than ten years, he may be excused for thinking that "everybody knew all about them." I thought so in regard to the question we are about to discuss, and that is the reason for the presentation of this paper before this society.

The question to which I ask your consideration and frank discussion is.—Does eye-strain ever cause disturbances, functional or organic, in parts of the body not intimately associated with the eye? Let us see whether a definite, affirmative answer can be given to this question. Necessarily the answer can only be obtained

from clinical evidence.

Schoen<sup>2</sup> reports having cured over one hundred patients suffering from gastric catarrh, dilation, nervous dyspepsia, functional and organic heart disturbances, Basedow's disease, neurasthenia, etc. In all these cases he found a definite ocular disturbance, the removal of which cured the chronic disease. He believes that pneumogastric irritation is the cause of these manifold symptoms, and that this irritation is the result of the constant demand on the innervation of the patient in his efforts to obtain binocular vision.

Miller<sup>3</sup> was able to banish evidences of irritation of the vagus and a diversified train of symptoms in ten cases by correction with prisms of an existing upward squint. His first patient was a woman who had suffered for months from extreme nervousness, oppression and cramps in the stomach, eructations, loss of appetite, nausea, cardiac oppression and other symptoms of pronounced neurasthenia. She also suffered excessively from sea-sickness, and from neusea when riding in the cars or swinging. Correction of the squint banished, at once, all these symptoms in this and in all the other cases.

The work done by Ranney<sup>4</sup> is perhaps well known to every one present. As

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early as 1896 he reported over twenty cases of epilepsy greatly improved, or entirely cured, by means of treatment directed towards obtaining normal binocular vision. His reply<sup>5</sup> to Dr. Peterson is especially convincing, and leaves little to be desired so far as proof is required to fortify his contentions. A little over a year ago he again reported ten illustrative cases showing the varied and serious conditions that may have their origin in eye-strain. Among them are wry-neck, progressive deformity of the head, arms and hands, complete nervous prostration, loss of power of walking accompanied by severe spinal pain, etc.

Lewis reported one case of indigestion<sup>6</sup>, one case of rheumatism, and one case of insanity<sup>7</sup> cured by means of proper fitting glasses.

At the last annual meeting of this body, Bulson,<sup>8</sup> in a very conservative paper, reported a number of cases of various nervous disturbances, including menstrual irregularities, nervous prostration, insomnia, chorea, absent mindedness, gastric disturbances, chronic constipation, that were cured by correcting the ocular irregularities, that were present in every case.

Gould,<sup>9</sup> in a very instructive paper, has shown the relation between certain forms of astigmatism and scoliosis in school children. Oliver<sup>10</sup> reports a peculiar case of urticaria due to eye-strain, and cured by wearing of proper glasses. Every time the glasses were left off, or when improper ones had been fitted, the urticaria would return, only to be cured again when the proper lenses had been adjusted. This case was carefully followed up for some years, and is a convincing argument on the reflex influence of eye-strain. In this case the urticaria may have been the

result of some derangement in the stomach, which in turn was the result of eye-strain.

The above reported cases are only a few of those found in medical literature, but they are sufficient to establish the fact that *under certain conditions* eye-strain may cause almost any form of functional disturbance in any part of the body, and functional disturbance, if only continued long enough, will frequently lead to organic changes.

Permit me also to report three cases that I have selected from a large number which I have met with; and my reason for reporting these cases is not so much to convince the profession of the possibility of such disturbances, but rather to point out the reasons why such disturbances do take place, and what the required conditions are for their manifestation. Medical writers have rarely attempted to explain why such disturbances should occur, and many of the reported cases perhaps do not contain all the data necessary for forming the basis of opinions that could be of any scientific value.

In presenting the clinical features of these cases I have omitted all unimportant details, and reported only what I believed to be of value in the discussion of this subject.

The first case is that of a boy of 14 years, whose refraction error had been improperly corrected some years previously, and who, since that time, had suffered more or less from all the ordinary symptoms of eye-strain, and in addition thereto had gradually developed gastro-intestinal disturbances, a condition of malaise similar to that due to malarial intoxication, a loss of muscular tone and vigor, gradually losing flesh, and growing weaker. He was obliged to leave school, and eventually became so weak that he could not walk the length of an ordinary city block without being obliged to sit down and rest. His father



being a physician, no efforts were spared to bring the boy back to normal health. As one of Chicago's most prominent oculists had refracted his eyes, there was no suspicion that they could be at fault. The tonsils were slightly enlarged, and in desperation they were seized upon as the root and cause of all this trouble. A nose and throat specialist of national reputation was called in, and the tonsils and adenoids were removed. The operation seemed to give a slight temporary relief, but soon the boy was as poorly as ever. About this time he was referred to me for new glasses. The examination so exhausted him that he was obliged to stay in the city and go to bed. His stomach refused to accept anything for nearly 36 hours, and then only the mildest liquid diet together with liquid peptenoids. In a week he had regained sufficient strength to return home, though still very weak. The new glasses made him feel much more comfortable, and gradually day by day he gained in strength, and within a month, to use his own expression, he was playing base ball with his boy companions. This was eight years ago. He has been under my observation more or less constantly ever since. He is today a fully developed young man, and perfectly healthy so long as he wears his glasses. But no sooner does he leave them off for any considerable length of time than all the old symptoms reassert themselves, though in a less degree than formerly.

Two points in this case call for special consideration, which I have purposely omitted so that I might mention them by themselves. First the boy had inherited a distinct neuropathic disposition, and secondly, the age of puberty. The result of powerful over-excitation of certain muscles and nerves, together with a congenitally weakened nervous system intensified by the general nervous strain and excitability of the age of puberty, seems to me to reasonably explain the intenseness of the reflex nervous phenomena of this case.

Case II. A girl of seven years, who had for two years been more or less constantly under physicians' care for nausea, vomiting, a general tired out feeling, and pains in the lower limbs. The child appeared fairly well nourished and of normal development, and apparently well in every respect. Her father has very decided nervous troubles, and it is probable that the child has inherited a certain nerve weakness. She was brought to me for accommodative asthenopia due to hyperopia. Being quite busy at the time, I did not question the mother very carefully on the general condition of the child, and attended simply to the correction of the hyperopia. Three

months afterwards the mother brought the child back to me, and then gave me a detailed account of the child's history previous to the wearing of her glasses, and told me of the total disappearance of all her troubles as soon as she had received her glasses. This case made a very strong impression on my mind, especially because the people are unusually intelligent, and had voluntarily come back to tell me of it. Not a single leading question was asked, and we all know that some patients can be made to give a history of almost any combination of symptoms, if only leading questions are asked. Whenever the glasses are left off the old symptoms reassert themselves. I have ascertained that the child has naturally a weak stomach, and that certain kinds of food always easily distressed her.

In this case two important etiological factors must be recognized, viz., a probable congenitally weakened nervous system and a weak stomach. Their relation to the disturbances mentioned as results of eye-strain will be discussed more fully later on.

Case III. A robust, well developed, physically perfect young man without any discoverable hereditary taint or dyscrasia, aside from the fact that nearly everyone in the relation has a greater or less degree of refractive error, and most of them quite complicated. Fifteen years ago I examined him, and found that he had a compound hyperopic astigmatism, with diverging axes, and a slight hyperphoria. This was in 1891. Two years previously another physician had also found a very similar condition, and had given glasses for it. The hyperopic astigmatism was corrected. Nothing was done for the hyperphoria, as the glasses given apparently made the eyes feel very comfortable. I quote the following from a letter written by himself, giving his subsequent experiences:

"In 1893 I was studying at an eastern university, and during the winter my eyes gave me much trouble. Frequent headaches, inflammation and soreness often prevented me from doing any study at night. One morning in the spring I woke up feeling too dizzy to stand. The doctor thought it was indigestion, but the effects of this dizziness and nausea continued in quite marked form for several months. Perhaps vertigo would better describe it. During nearly all this time my eyes were so sore that it was very painful to touch them or press them with my fingers.

In the spring of 1895 the same trouble reoccurred, and I went to see a general practitioner about it. He sent me around to several specialists, and

after some weeks we concluded that my eyes were the main cause of the trouble. An oculist found about five degrees of vertical muscular error. This was corrected in my glasses, and I have been wearing these glasses with  $2\frac{1}{2}$ -degree prisms in them ever since. After two or three years the vertigo disappeared, and it is very seldom now that it returns. The fact, however, that it returns now occasionally when I have a severe cold makes me think that my catarrhal condition may have had a great deal to do with my former troubles also. During all that time I was troubled with catarrh, but the specialists did not seem to think that the vertigo could be caused by it. One of the oculists also, was sure that eye-strain did not cause it, and while since wearing these prism glasses I have begun to feel better, still I am not fully convinced that they necessarily have been the only cause of it. My general health has improved very much, and I have to some extent mastered the catarrh. All this together I would rather give as the reason for being free from the vertigo today."

About eight years ago he consulted me concerning his catarrh. Examination disclosed a suppurative ethmoiditis. The cells were carefully curetted and cleaned, and treated for several weeks, followed by still greater improvement than he had previously obtained from his glasses, as the letter shows. In this case there was no evidence of any debilitated or weakened nervous system, nor of any debilitated or weakened condition of the abdominal viscera.

Let us see what light these cases may throw on the question, how to explain or account for such disturbances. This is a difficult question indeed, and while I do not pretend to solve the problem completely, permit me nevertheless to offer a few suggestions.

1st. It seems to me that the analogy between reflex disturbances due to eye-strain and reflex disturbances due to powerful psychological impression is quite close. Take, for instance, the faintness, dizziness, nausea, and vomiting that some persons suffer from when they are only witnessing even a minor surgical operation such as extracting a tooth. This so-called psychological vomiting is something with

which we are all very familiar. A similar relationship is present in cases of neuro-gastric disturbances due to a small ulceration of erosion of the cervix uteri, and of cardiac irregularity and certain forms of dyspepsia, and asthma due to nasal disease.

Homer Wakefield<sup>11</sup> has pointed out that "fatigues, strains, pressures, etc., when prolonged, operate through connecting nerves to produce tetanics of opposite nerve endings. An application of this knowledge to eye-strain shows how, according to the degree and duration, a tetany may be induced and maintained at distant nerve distributions directly, or by primarily affecting cerebral centers and indirectly, tetanics of dependent areas may be in evidence. The nerve ending tetany of eye-strain being continuous, the suboxidation and the increased generation of metabolic products augments the terminal subkatabolism, and according to the degree and intercurrent influences and modifications, produces such manifestations as hyperesthesia, perhaps twitching, contraction, pain, convulsions, flaccid relaxation, anesthesia, expansion, hemorrhages, ulceration, etc."

If the doctrine of reflex nervous excitability and disturbance is well established, and it is admittedly so, then it is possible, and it may be expected that such disturbances as are indicated in this paper may appear whenever the conditions for them are favorable.

2nd. That eye-strain alone cannot be held responsible for such pronounced disturbances, as are occasionally met with, is proved by the fact that such a very small percentage of cases of uncomplicated eye-strain produce such disturbances, and consequently we must look for

certain other attending conditions or circumstances, the combination of which, together with eye-strain, would solve the etiological difficulty. What these conditions are, and why one person is more profoundly affected by them than another, is the question to be answered, and it seems to me that at least a partial explanation may be found in the fact that in nearly every one of these extreme cases of reflex disturbance, there is an increased irritability of the organ or organs affected on account of some subnormal condition present, perhaps only in a minor degree, or a tendency toward certain nerve weaknesses or neuroses, which alone, however, are not sufficient to produce the symptoms complained of, but where powerful and continuous nervous reflexes added, act as the proverbial last straw to break the camel's back.

For instance, a person suffering from an irritated condition of the gastric mucous membrane, whatever its cause, might suffer only slight, or practically no inconvenience therefrom, at least not sufficient to call for medical attention. But let this already irritated stomach receive powerful reflex nervous impulses, whatever their origin, and it can easily be understood how the added nervous excitability and exaggerated nervous impulses added to the already existing condition, might bring about a subkatabolic state, the results of which have been so well described by Wakefield. And if to this be added an inherited neuropathic tendency and an impressionable disposition, it seems to me that we have all the conditions necessary to produce the disturbances mentioned. The case of the little girl, already mentioned, is an admirable illustration of this theory. And the reason why one person

suffers less profoundly from these reflex disturbances than another, seems to me, finds a logical explanation in the fact that in some persons one or more of the several causative factors as mentioned is wanting or is present only in a negligible degree.

3rd. Another explanation is suggested by the fourth case reported, in which there were no evidences of any nerve or visceral disturbance, except those which were purely reflex, but while the patient was suffering from a complicated refractive error, together with a hyperphoria, he afterwards developed a suppurative ethmoiditis. The relief of the eye-strain and muscular error did result in a considerable improvement, but no cure as such had been obtained. This did not take place until the attending ethmoiditis was also treated and cured, so that we may infer from this and other similar cases, that when two or more sources of more or less continuous irritation exist, they are likely to be attended by powerful reflex disturbances which would not take place if there were only one source of irritation. The first case reported also bears out this deduction though to a less degree. The slight and transient improvement following the tonsilotomy and adenectomy would tend to confirm this view.

Whenever the body as a whole is in a physically and functionally perfect state, it is highly improbable that ordinary irritation from any single source will be followed by such marked reflex disturbances as those manifested in the cases reported. I am firmly convinced that the healthy organism is fully capable of neutralizing the baneful effects of simple irritations; but also, that there is a numerical limit beyond which



such irritations may not safely go. In other words, if the doctrine of functional compensation is well established, then the baneful influences of a single source of irritation is likely to have an extremely limited field of action, but it is not unreasonable to expect that as the sources of irritation increase, both numerically and in intensity, that then we will sooner or later reach the limit of the compensatory powers of the organism, and so-called reflex disturbances must follow.

In the fourth case reported there were practically no reflex disturbances from the eye-strain alone, so long as it was not complicated with the ethmoiditis, but as the ethmoiditis appeared and increased in intensity, the reflex disturbance also began to appear and to increase. That ethmoiditis alone cannot be held accountable for these disturbances is borne out by the fact that relatively few uncomplicated cases of this disease are accompanied by them.

While we are thus forced to admit that eye-strain may and does occasionally cause disturbances in distant parts of the body, we must not forget that in the etiology of the vast majority of these disturbances, eye-strain, while a very important factor, is generally only one of several

factors, each one of which must receive proper recognition. It is true that many of these disturbances cannot be relieved without relieving the attending eye-strain, but it is equally true that the vast majority also require other treatment in addition to glasses, in order to obtain permanent results. In the cases I have cited above, you have noticed that each one had been under professional care for a longer or shorter period of time before having their eyes treated, and it is presumed that they all received proper treatment so far as the general physician is concerned, but that the one thing that was lacking to complete the cure was glasses. But it does not seem rational to me that glasses should receive all the credit for the results obtained, and that no credit should be given to the treatment administered previously.

It is exceptional for the oculist to see these cases before they have been under the care of the family physician, but in the few cases that I have met with at this stage, I have invariably found while glasses gave considerable relief, they did not entirely relieve all the trouble, and subsequent treatment by the family physician was needed to bring about a complete cure.

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#### Discussion.

**Dr. A. E. Bulson**, Jackson, has had many cases of nervous affections of long standing finally discovered to be due to errors of refraction. These cases are often treated for numerous things by the general practitioner. He mentioned one case of chorea and nervous breakdown in a girl, cured

by correction of refractive error. This patient had had indigestion, dysmenorrhea, and anorexia, but was well in three months. Believes many intractable cases of chorea may be referred to the oculist with hope of benefit.

## THE TREATMENT OF UNUNITED AND COMPOUND FRACTURES WITH BONE PINS\*

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A. I. LAWBAUGH, M. D.  
Calumet.

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Ununited fractures are a source of great annoyance to the patient and frequently cause the medical attendant many anxious moments. The causes of non-union are to be sought in local conditions affecting the process of repair at the seat of fracture, or in constitutional tendencies or diseases that act locally in retarding or preventing union.

The chief local causes are imperfect fixation, unreduced deformity, the intrusion between the fragments of tendon, fascia or even muscle, necrosis, and more rarely the development of a malignant growth at the seat of injury, as, for example, an osteosarcoma. Imperfect fixation is by far the most common cause, but cannot always be prevented. Certain fractures cannot by the use of any device be kept at rest if muscular contraction, either voluntary or involuntary, that disturb them is persistent in spite of the apparatus or method used.

Any constitutional disease so affecting the osseous system that a predisposition to fracture is produced, is very likely to delay or wholly prevent union after fracture, through disturbances or failure of the processes of repair. Ununited fractures occur, therefore, very frequently in

rachitic and syphilitic subjects as well as in those affected with osteomalacia.

Fortunately, non-union is of far less common occurrence than formerly; particularly is this true of fractures of the leg. The improved results are, I believe, to be attributed largely to the almost universal employment of plaster of paris or some other form of fixed dressing. Moreover, the recent application of Roentgen rays as an aid in locating and defining fractures has been of great benefit in securing more perfect coaptation of fragments and consequently their early union.

The treatment of delayed union or of non-union of fractures consists essentially in prolonged fixation. When the failure to unite has persisted for several months—three months according to the majority of authorities—and when uninfluenced by prolonged fixation, the fracture may properly be called reunited. Under these conditions some special management of the case becomes indicated, and should be carried out. The fragments may be rubbed forcibly together in the hope that the irritation and congestion so produced may excite anew the reparative processes. In the case of a bone of the lower extremity some form of apparatus may be applied that, while permitting the use of the limb also gives fixation, so that as the result

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of the movements of the fragments an increased reparative reaction may be brought about. To the same end the fragments may be drilled in various directions under proper aseptic precautions, the aim of the drilling being to excite a traumatic and non-infective inflammation.

Never very satisfactory, these various methods of temporizing with ununited fractures have gradually fallen into disuse, since more radical operations, formerly very dangerous, have through improved surgical technic, become comparatively safe. In general, it is best to follow the principle that any fracture failing to unite after three months of careful treatment should be regarded as a proper subject for operative procedures.

Whether the defect is in the fore-arm, leg or thigh, the operation consists in exposing the seat of fracture by incision and dissection, isolating the fragments from their surroundings, and after thoroughly freshening their ends, uniting them by means of some form of suture or retaining material.

The ends may be scraped after the manner of Volkmann, or beveled according to the method of Diffenbach. The suture or retaining material used may be silver wire, silkworm gut, pins or screws. The wound is then closed and treated in all respects as a case of recent compound fracture similarly dealt with. Senn uses a bone ferrule, and this in his hands has proved very effective, holding the parts effectually, and being absorbed without

causing any irritation. The only disadvantage that can be urged against this method is the difficulty in obtaining these ferrules. In the case of a large city or institution such material could, no doubt, be easily obtained.

Silver wire is used quite extensively and is very efficient, but the fact that it sometimes causes irritation and must be removed, forms an important objection to its use. In my own work I prefer the use of ivory nails or pins for the purpose of fixation in both compound and ununited fractures whenever such a method is indicated. Two pins are used, unless the bone is small, as in the case of the radius or ulna, and even then the two small pins are preferable to a single large one. The pins are placed at an angle with one another so as to brace the fragments. To give additional firmness to the parts, I also place a strong piece of kangaroo tendon around the fragment. This is absorbed, as are the pins, and causes no irritation.

In closing, I should say that I urge the use of bone pins for the following reasons:

1st. The parts are held more firmly than by any other method.

2nd. The ivory pins can be thoroughly sterilized, and are applied with as great or even greater ease than any other material.

3rd. They cause no irritation, are completely absorbed, and nothing more is heard of them.

#### DISCUSSION.

**Dr. C. S. Oakman**, Detroit: Indications for open treatment of recent closed fractures are inability to attain and maintain approximation, due for instance to interposition of soft parts, and proximity to joints. Retentive material is preferably absorbable.

**Dr. H. O. Walker**, Detroit. commended the use of ivory pins, because absorbable. For a dif-

ficult case of fracture of the thigh, he had used an ordinary long screw such as carpenters use, and later had removed it.

**Dr. C. B. G. de Nancrede**, Ann Arbor, spoke of the use of "wood" screws and two silver plates as giving great strength to the union thus effected.



## THE TREATMENT OF FRACTURED PATELLA\*

CARL S. OAKMAN, M. D.

Detroit.

It would be impossible to present any really new features in the treatment of fractures of the patella, but there are certain points which can be reiterated to advantage, because they have not been appreciated so widely as they ought. The adoption of any one procedure for all cases is always unwise, no matter what the surgeon is dealing with. And so in this injury, he who invariably wires the fragments is liable to disappointment as well as he who invariably uses nothing but splints. In brief, every case must be regarded on its own merits and good judgment is the keynote of success.

There are two major divisions of the methods of treatment: first, non-operative; second, operative. The non-operative means will include fixation by splints of wood, binder's board, metal, or plaster of paris. Operative means will include only one procedure—exposing the knee joint and suturing together the fragments in one way or another. The details of accomplishing this are quite varied. Fixation by clamps, pins, or any agent that is partly in the tissues and partly outside, is mentioned only to be condemned as uncertain, unclean, and unsurgical. Subcutaneous suture without incision has

been practiced, but this likewise is uncertain and nearly as dangerous as open operation.

Comparison of operative and non-operative measures has resulted (according to the statistics of Quinby, Martin and Thomas) in showing the former to advantage, yet statistics are hardly necessary, for every surgeon knows that a larger proportion of sutured patellæ give perfect or good function than of those treated conservatively. But in any long series of operated cases we find occasional grim reminders, such as ankylosis, amputation, or death from sepsis. This is the one great deterrent and this is why open fixation cannot be universally recommended. On the other hand, if we should for this reason confine ourselves to conservative treatment there would be, as figures show, few perfect results, and many poor ones, which in hundreds of cases means for working people a diminished earning capacity, an impaired gait, and life-long annoyance. The explanation of the uncertain outcome in non-operated fractures lies in the fact that the fragments unite by fibrous tissue and seldom by bony union. This in turn is explained by the interposition of torn edges of aponeurosis between the fragments. Such is the usual condition, as proved by operation.

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In choosing the method of treatment I should lay emphasis first of all on one dictum: Never operate unless under circumstances that are absolutely ideal for asepsis. Next, do not operate if the patient is aged—say over sixty, for a working basis—or if in poor health. These, I believe, are the chief contraindications, and if none of them exists, then operation may be considered. It is claimed by some that open fixation should be limited to cases with wide diastasis of the fragments or with great joint distension. But we must remember that fragments that lie close together are just as liable to have aponeurosis interposed and result in fibrous union as are those widely separated. In joint distension we have a sign that is important, for it signifies rupture of the capsule. As a matter of fact it is known now that these ruptures occur in the majority of patellar fractures, allowing free escape of fluid, blood, and secondary exudate into the surrounding tissues. Operative repair is the only way of assuring the original integrity of the capsule. It is now a routine procedure in many large hospitals to suture all fractured patellæ except in old or unhealthy patients, and I believe the practice is steadily increasing. Although eight years ago the operation showed a mortality of 1.4 per cent in 711 cases collected by Powers, yet it is undoubted that the mortality of a series compiled in the last five years would be less than one-half per cent. I have never seen a case result in sepsis. Nevertheless, the wisdom of this routine is not as yet universally admitted and it is probable that each case should be considered carefully before advising operation.

If it is decided not to operate, what

means are to be used for fixation? I am used to relying on the posterior wire splint—indeed, I use it likewise after operation, and I believe nothing is so good. It requires, however, considerable practice to get the most out of it. The advantages are lightness, comfort, cleanliness, easy access to injury. By the proper application of adhesive plaster the fragments of the broken patella can in nearly all instances be very closely approximated. For about two weeks a case should be watched carefully, the strapping and bandaging readjusted according to the increase or decrease of swelling, and massage begun as early as desired. Early massage (i. e., in the first week) should be very carefully done and only by an expert. At the end of two weeks conditions will usually allow the application of an ambulatory splint, for which plaster of paris is the most generally useful. This should extend from toes to groin and should be split on both sides so as to allow daily removal, and the use of hot water, massage and passive motion. The last should be increased daily little by little. Hot water is a very useful agent and should be applied on a heavy material, like a bath towel, entirely enveloping the knee, and hot as can be borne, for fifteen minutes, much in the manner that the barber uses hot towels on the face. The massage and passive motion should immediately follow this. As soon as the plaster splint is applied the patient should begin to use crutches. Cases treated in this way require many weeks for repair, and a strong knee is gained only in six to twelve months.

As to operations, there is one detail that is not sufficiently appreciated, i. e., that non-absorbable suture is rarely ne-

cessary, and that the suture does not need to be passed through the fragments of bone. Chromic catgut applied to capsule and aponeurosis or tendon is all-sufficient. This has been practiced and used by a few men for several years, but a great many men still cling to silver wire or drilling the bone. Wire suture in a certain proportion of cases causes irritation sooner or later and not seldom causes suppuration. It is an unwise place for wire, on account of the constant motion of the knee joint. As for perforating the bone, it takes time, liberates bone dust, which is hard to clean away, and often lends no additional security. The fact is, that if the fragments are brought together as they perfectly well can be by suture of soft parts, in two weeks' time their union is as firm as if held by catgut passed through the fragments. The best time to operate is soon after the fracture—any time within six days. Certain surgeons advise waiting nearer ten days, but this allows considerable organization of blood clot and it loses time to the patient.

The incision that shall be used is much disputed—transverse, longitudinal, curved, with convexity up or down. The curved incision with convexity down affords extensive view of the field, skin infection is less likely to extend to site of fracture and the scar is less conspicuous and less liable to irritation. I prefer it. Irrigation of the joint is not so much practiced as formerly; blood is removed gently by sponges and the joint cavity is molested as little as possible. Drainage should seldom be used. The details of operation as described by Blake are applicable to nearly all cases. After operation, I prefer again the posterior wire splint until the wound is united. This usually occurs in a week, and then plaster

is applied and the patient can begin cautiously to use crutches. The cast is split any time thereafter. Massage, hot water and passive motion may be begun in two weeks. The cast should surely be split at the end of the second week after operation, and it may be discarded at the end of the third week. Then a flannel bandage is worn from toes to thigh. Inside of four weeks the patient can begin to bear a little weight on the foot, gradually increasing it. The bandage may be discarded after two weeks, although it can be continued if necessary for comfort, as will often be the case. Fractures treated in this way will more often than not result in strong union; and the patient is often able to resume work in six weeks or even sooner.

The foregoing applies only to fresh closed fractures. In compound fractures there is hardly any choice but to operate. Also in old fractures with poor results, due to wide separation of fragments, the treatment is operation, and in these cases it will often be found necessary to use metal wire because the tension is so great.

For measuring the flexion in a convalescent case I have made use of a heavy lead wire, which is moulded to the contour of the knee over the patella, and then traced on paper. In this manner the increase of motion can be seen from day to day.

In conclusion, I would repeat that operation should never be considered under any but ideal conditions, nor in sick or aged patients. In operating recent cases, use absorbable sutures applied to the soft parts. For fixation use first the wire splint and then plaster of paris. And if you advise operation, never fail to state honestly to the patient the risk as well as the advantage.

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## SOME OBSERVATIONS ON RHEUMATISM AND ITS TREATMENT WITH THE MINERAL BATHS OF MT. CLEMENS—

### REPORT OF CASES

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RICHARD LEUSCHNER, M. D.

Mt. Clemens.

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During a lengthy professional activity as bath physician at Mt. Clemens, covering a period of fifteen years, I have had occasion to secure and classify considerable clinical material regarding rheumatism in its various phases and manifestations. I feel that the observations and experience gathered during this time, and herewith briefly presented, should be of interest to those physicians not already familiar with our baths. If, in presenting this clinical evidence, the claim is made that in the treatment of rheumatic affections the water of no other known bathing resort excels that of Mt. Clemens in its energetic, speedy and pronounced action and effect, we may trust and reasonably assume that our contentions on this point are not without foundation.

Briefly described, our mineral baths are powerful, iodo-bromo-sulpho-salines obtained from wells averaging a depth of 1,200 feet, having a specific gravity of 1.116; a mean temperature of 56 Fahrenheit. One hundred and twenty-five pounds of aggregate minerals are contained in each bath of about 65 gallons. The water is heated to a suitable degree ready for immediate use in the bath houses. The accompanying analysis, ex-

cuted by John Meyer, chemist, Mt. Clemens, shows physical character and chemical composition of the water.

It is a matter of record that the majority of visitors frequenting our baths are patients suffering from rheumatism in some form, and partly for this reason my observations and researches were directed more to the study of this disease; at the same time splendid opportunities are always afforded and clinical material constantly available for watching and observing the various manifestations and progress of this disease during a bath cure. In compiling my notes for this paper, owing to space, I sought to confine myself mostly to the report of cases with little reference to pathology and etiology, separating and mentioning only the two larger groups, articular and muscular rheumatism, and reserving the discussion and bath treatment of rheumatic arthritis, arthritis deformans, sciatica, and other painful manifestations resembling rheumatism for some future date.

That articular rheumatism is the product of a disturbed metabolism in consequence of an auto-intoxication resulting from constant malassimilation due to the functional derangement of one or more

parts of the digestive tract plus an infection, attributable to some specific micro-organism, possibly a diplococcus not character: etiologically, nevertheless, quite a difference exists between the two types, inasmuch as in muscular rheuma-

### PHYSICAL CHARACTER

TEMPERATURE..13.61° C.. or 56.5° Fahr.
REACTION..... Faint Alkaline.
SPECIFIC GRAVITY.....1.116.

Chemical Constituents	GRAMMES IN 1000 CCM., or 1 LITRE.	GRAINS IN ONE U. S. GAL.	GRAINS IN ONE IMPERIAL GAL.
HYDROGEN SULPHIDE	0.14620	8.53961	10.26071
HYDROGEN SELENIDE	0.00018	0.01047	0.01263
HYDROGEN TELLURIDE	0.00027	0.01574	0.01898
CARBONIC ACID, <i>free</i>	0.14878	8.69022	10.43172
CARBONIC ACID, <i>half combined</i>	0.03185	1.86033	2.23316
CALCIUM CARBONATE	0.06568	3.83609	4.60675
MAGNESIUM CARBONATE	0.00061	0.03557	0.04266
FERROUS CARBONATE	0.00596	0.34810	0.41784
COBALTOUS CARBONATE	0.00112	0.06530	0.07839
CALCIUM SULPHATE	1.55960	91.09819	109.35237
CALCIUM HYPOSULPHITE	0.13461	7.86260	9.43821
SODIUM SULPHITE	0.69579	40.64125	48.78549
SODIUM SELENITE	0.00533	0.31122	0.37371
SODIUM TELLURITE	0.00574	0.33529	0.40241
SODIUM CHLORIDE	97.81765	5713.65182	6858.64638
POTASSIUM CHLORIDE	7.94225	463.91670	556.88396
LITHIUM CHLORIDE	0.04665	2.72483	3.27081
AMMONIUM CHLORIDE	0.17624	10.29402	12.35717
CALCIUM CHLORIDE	80.10109	4678.80376	5616.42046
MAGNESIUM CHLORIDE	41.20369	2406.75932	2889.06499
MAGNESIUM IODIDE	0.01460	0.85266	1.02363
MAGNESIUM BROMIDE	1.21730	71.10401	85.35296
STRONTIUM SULPHATE	0.01300	0.75916	0.91130
SODIUM BIBORATE	0.03790	2.21372	2.65739
ALUMINUM CHLORIDE	0.02975	1.73764	2.08594
SODIUM SILICATE	0.01457	0.85096	1.02147
SULPHUR, <i>in suspension</i>	0.00712	0.41584	0.49916
FERROUS SULPHIDE, <i>in suspension</i>	0.00621	0.36261	0.43543
RUBIDIUM	Trace	Trace	Trace
CÆSIUM	Trace	Trace	Trace
<b>TOTAL</b>	<b>231.42974</b>	<b>13518.09703</b>	<b>16227.08698</b>

positively isolated, seems no longer an argument. In the muscular form we also cannot absolutely deny its infectious

tism the climatic influences are held to be largely responsible and to be an important contributory cause for the onset

of the disease. Experience has called my attention to the fact that articular rheumatism may originate and develop entirely independently of any change of temperature in which the patient has dwelled and lived, while, in muscular rheumatism, a sudden refrigeration of the body surface is regarded as an important factor. For this reason we notice more the involvement of the broader muscles of the back, chest and shoulders, than the narrow muscles of the fore-arm. Both categories of rheumatism we may divide into acute and chronic and the difference between them, as in all infectious diseases, can be briefly characterized in the following manner: In the acute stages of illness we are always dealing with a rapid development of the germ of disease in the organism, and if the system shows sufficient reaction to withstand the invasion and is otherwise amply strong, the same rapid development of the disease germ will be arrested and the latter eventually collapse. On the other hand, a low resistance will permit speedy disturbance of function of the vital organs, frequently the heart, and the disease often ends in dissolution. In the chronic form of disease the relation between the cause of illness and vitality of the organs is entirely different. Inasmuch as they are approximately in a state of equilibrium, it is generally assumed that other factors acting on the organism control the favorable or unfavorable course of the disease.

We find in acute rheumatic manifestations that the application of the mineral bath alone will not always sufficiently elevate the power of resistance of the patient without the aid of suitable specifically acting medicine. Moreover,

it seems to be a matter of fact that the combined effect of medicines and diet is materially strengthened and becomes more effectual with the assistance of the additional mineral bath. In chronic troubles the conditions are somewhat different. We are not expecting speedy results, but are satisfied with a gradual strengthening of the patient's resisting power. In these cases internal medication is generally unnecessary, the direct beneficial action of the mineral bath becoming more apparent and in this wise actually proven. To sustain these contentions the following cases will be of interest:

#### Case I.—Chronic Articular Rheumatism.

Mr. B. B., of Cincinnati, began treatment in May, 1896. Patient is a bachelor, aged 55. Original weight 155 pounds; weight on arrival 101 pounds. From boyhood inclined to biliousness, headache and constipation; always a quick worker, fast eater and heavy smoker. Was first taken ill with rheumatism in 1886. Since then had recurring attacks two or three times a year, the same gradually developing into a complete uselessness of nearly all the joints. No gonorrheal history. On examination, he presented a pinched face of muddy complexion; eyeballs yellow; thickly coated tongue; meta-carpo-phalangeal joints thickened and swollen; feet and ankle joints show analogous deformities; interossei of the back of hands atrophied; knees and elbows much enlarged; movements of shoulders and hip joints much impaired; most joints partially ankylosed; extreme atrophy of muscles of the thighs, calves, and arms. When assisted, patient is able to stand but is unable to walk. Heart is sound, liver enlarged. Urine scanty, high colored; some albumin. He has constipation, anorexia and flatulency. The patient reminds one of the living skeleton and ossified man of museum fame. After three months of bathing with intervals of rest aided by active elimination, diet, fresh air, sunshine, etc., marked improvement was accomplished. With the gradual return of function of the disturbed organs the metabolism was slowly being restored, joints and muscles resuming normal action and strength. He remained about six months, alternately resting and taking the baths. His health was excellent and he could take daily walks of from one to five miles without any discomfort. Present



weight 143 pounds. The only visible sign left to show the remnants of severe rheumatism are the deformities in the meta-carpo-phalangeal joints. Mr. B. B. has been coming every year for four weeks of rest and bathing. In this case the powerful alterative and lymphagogic action of the baths is especially exemplified.

#### Case 2.—Acute Articular Rheumatism.

Mr. F. G., of Chicago, took ill with acute articular rheumatism about the middle of April, 1896, involving both ankle joints, right knee joint and right elbow joint. After five weeks treatment at home patient was sent to Mt. Clemens to get further relief from some stiffness that was still manifest in one elbow joint. During the trip he was suddenly attacked with renewed pains in the right elbow joint. Temperature rose to 103°, pains were felt in both elbow joints, both wrists and later also in both ankles. In spite of antipyretics, etc., temperature could not be reduced. After the third day, temperature gradually diminished to 99°, but continued pains and swelling of all the joints was a matter of much discomfort. Patient was given a bath the next day at a temperature of 98°, of fifteen minutes duration. No massage allowed. Temperature next day normal. Patient enjoyed six hours of comfortable sleep. Baths were continued daily after this except Sundays, and antipyretics were discontinued after the third bath. Pains and swellings in the joints gradually disappeared, and after the fourteenth bath patient was able to be about the lobby of the hotel. At the end of four weeks in which the patient received 23 baths, recovery was accomplished. In this case the combined effect of medicine, diet, and baths resulted in a complete cure which seemed impossible with the use of drugs alone.

#### Case 3.—Chronic Articular Rheumatism.

Mr. F., of New York, lived and conducted a farm for years in South Carolina. His house was situated on an elevation, while most of the land was located in a moist and deep hollow. In the evenings the atmosphere surrounding his residence would generally begin to become impregnated with the dense fog arising from this miasmatic region. Six years prior to his first visit to Mt. Clemens, Mr. F. was able to ride horseback for hours and walk miles without any discomfort, but as the years rolled by it became more difficult. He would of necessity complain of painful swellings of the different joints, which would yield, with proper treatment, very readily

at first, but later they were more difficult to overcome. The paroxysms would be of shorter duration, and upon his arrival, June, 1901, here in Mt. Clemens, he presented the characteristic rheumatic joints, involving especially both shoulders, knees, elbows and ankles. The joints were partially ankylosed and very painful when movement was attempted. Patient received his daily bath coupled with the necessary dietetic, hygienic and therapeutic measures in order to regulate the disturbed metabolism, and at the end of three weeks was able to attend to himself. In the fourth week of his sojourn he ventured (without my consent) a visit to Detroit, only to receive a setback sustained from the exertion. This, however, was again overcome, and at the end of six weeks he was dismissed as having conquered the malady. He visits Mt. Clemens once a year for a course of baths for "safety sake," as he expresses it. He has had no discomforts since his first visit.

#### Case 4.—Chronic Muscular Rheumatism, Presenting Torticollis, Vaginismus and Rectal-Constriction.

In the fall of 1897, Mrs. A., of New Orleans, presented herself for treatment. Patient had been married, but had never been pregnant. In the month of April, 1887, at the age of 45, during menstruation, her nervous system sustained a severe shock on the occasion of a fire which destroyed her home. The menstrual flow continued incessantly until the latter part of June of the same year when it stopped suddenly, never to return again. Patient has always been anemic, of a nervous, irritable temperament, subject to irregular menstruation, leucorrhea, headache, constipation, occasional pains in shoulder, back and chest, but has never been seriously ill or injured. Shortly after the cessation of the menses she was attacked with spasms of the muscles of the neck and face. Gradually the head became drawn to the left, the chin elevated and the ear nearly resting on the shoulder. At the same time the patient noticed a gradual constriction of the rectal sphincters, and vagina, with incidental pains in the muscles of the leg. As the time rolled by, her physical and mental condition assumed a more serious aspect, necessitating her commitment to bed under the care of nurses. Patient stated that she only left her home four times in eight years to go to Hot Springs for treatment. Patient received the customary bath treatment in conjunction with the necessary auxiliaries. An uninterrupted recovery was accomplished at the end of two months. The sterno-cleido-mastoid muscles

which were very much wasted, resumed their normal condition, the torticollis, vaginismus and rectal constriction disappearing. When patient left for home she could carry her head erect without being obliged to use her left hand as support, which she was compelled to do for ten years.

#### Case 5.—Acute Muscular Rheumatism.

Miss C., of Buffalo, who accompanied her sick mother to Mt. Clemens, was caught in a severe rain and thunder storm and was drenched to the skin. It was impossible for her to change her clothes until three or four hours afterwards. The following morning the young lady complained of severe pains in both shoulders and muscles of the back. There was no rise in temperature. A bath at 98° was advised. During the bath and for three hours afterwards the patient felt perfectly well, only to be annoyed by more severe pains in the same region. Counterirritants and internal medications were employed with some degree of success, the patient passing a restless night. The following morning, pains were still causing suffering to the patient. Another bath was ordered, the same treatment resumed and the night passed with very little discomfort. Baths were kept up daily for three weeks and the cure ended in an uninterrupted recovery. The peculiar feature of this case was the fact that the patient's cousin who accompanied her during her walk, was also drenched to the skin, and she seemingly showed a decided weaker constitution than the patient, but escaped without the least molestation. The inference would be that metabolic disturbances in the muscular structures of the patient were already manifest prior to the drenching, the sudden refrigeration favoring its further development; whereas, owing to a more normal state, the cousin escaped any annoying consequences. As in case No. 2, the baths and auxiliaries were instrumental in the successful termination.

#### Case 6.—Chronic Muscular Rheumatism.

Mr. T. P., of Pittsburgh, a brewer by occupation, on account of his vocation was for years exposed to the temperature of the hot brew-house and the ice-cellars; as well as to the climatic influences and changes in Pittsburgh, while driving a beer wagon. Patient is a large, powerful man, carrying considerable adipose tissue. In spite of the exposure and a great many other detrimental influences, his health during his fifteen years of active work was fairly good. Three years ago patient retired from active work. However, the superintending of his brewery kept him in con-

tact with the changes of temperature of his ice and brew-house. Patient must have had rheumatic tendencies for years, but owing to the active muscular exercise in former years resulting in the furtherance of the metabolism, they never presented themselves. Without the active work, and the combined obnoxious influences still prevailing, the appearance of an extensive muscular rheumatism would manifest itself very often; the same, however, would always disappear with suitable application of medicine, diet and massage, but would always re-appear on the least change of temperature, until at last the whole muscular structure of the back and chest became involved. Under the proper application of the baths, coupled with mild massage, with special attention to a frugal, abstemious mixed diet in conformity with our bathing methods, the patient, after four weeks of treatment, left for home perfectly relieved of his ailment. Three years have passed and Mr. T. P. has had no return.

In all these typical cases, the results of the baths are apparent. What the success is based upon, or what chemico-physiologic and physical action mineral waters have upon the normal and abnormal human system has been for a long time a matter of discussion. Only recently in a former article of mine on the physiologic action and effect of the mineral waters of Mt. Clemens, I conclusively proved the ingress of our mineral baths into the system through the skin, and consequently their correct action on the organism. Prominent physiologists and clinicians, as Wittich, Gutman, Wolkenstein and others, contended long ago that salt and alcohol solutions were absorbed through the skin. Without any suggestion on my part, patients would tell me of a peculiar salty taste in their mouths experienced after a bath. It was possible at first, however, to assume that, the gustatory nerves were stimulated by the inhalation of small particles of evaporated bath water; but, the actual finding and isolation of iodine and bromine in the urine of healthy bathers,

specially selected and watched, and who were on a strict dietary and hygienic regime during the time of the experiments, proved beyond a doubt the absorption of the mineral water through the skin during the bath. It appears also that the powerful concentration of our baths, exerting a marked stimulus to the skin, allows easier ingress of the water through the same. These findings and facts would naturally lead us to the conclusion, that

the external stimulus and the ingress of the water through the skin into the deeper circulation and lymphatics must exert a decided influence upon the metabolic changes; and, if this can be accepted as true, we are dealing with powerful balneologic alteratives and lymphagogues, their chemical composition and physical character being beneficial and especially adapted to the treatment of rheumatism.

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A skin-lined sinus opening between the coccyx and the anus, when not very short, usually leads to a dermoid cyst situated close to the coccyx. Frequently loose hairs from the dermoid may be found in the sinus.

Catgut strands do not make a good drain for wounds; they tend to swell and occlude.

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Silkworm-gut is easily dyed, and incidentally impregnated with an antiseptic, by immersing it for 24 hours in 1% solution of methyl violet, before the boiling.

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Stains of aniline dyes may be removed from the fingers with strong hydrochloric acid, stains of iodine with aqua ammonia, and stains by silver nitrate with potassium iodide solution.

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Indolent sinuses, as of the fingers after deep infections, frequently heal by the daily use of prolonged immersions in hot water.

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When clamping a vein in continuity secure the proximal end first; otherwise it will empty and may become lost to view.

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Intravenous saline infusions in too large volume are harmful by the production of congestion of the internal viscera. One to one and a half pints are enough for an adult of average weight.

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Patients will appreciate the use of black bandages for the scalp—where they are comparatively inconspicuous, and for the hands—where they do not soil.



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OCTOBER

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### Editorial

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**Laboratory versus Clinical Diagnosis** is a theme about which much has been written. It has often been assumed, as is indicated by the title, that there is a certain antagonism between the laboratory worker and the clinician; that, in a sense, they are pitted against one another in their endeavors to elucidate disease; that they are racing to reach the same goal by different paths—paths which run through entirely different fields. This spirit of rivalry is but natural when one considers that clinical laboratory methods are of very recent date and seemed for a time likely to detract from methods of physical examination long in vogue.

It is also natural that much is expected of these chemic and microscopic methods which is not fulfilled. When these disappointments are realized the clinician has his innings and he usually makes the most of the failures encountered by his brother of the laboratory.

That the value of new methods is at first always overestimated, history amply illustrates. Examples have been as numerous in clinical as in laboratory work. When Piorry introduced the use of the plexometer in percussion, he held that every organ in the body had its own char-

acteristic note. Long and strenuous was the controversy over this until Skoda, in 1839, showed that it was false. Similar contentions were made for the binaural stethoscope. The early history of bacteriology teems with controversies between the hospital ward and the laboratory, and they are still distinctly to be heard. The introduction of methods for blood examination furnishes many interesting polemics. More recently, the Roentgen rays have been exploited as un-failing and how great has been the disappointment! Radium, too, has had its fling and is now relegated to the important but not all-important place where it belongs. We may expect the same rise and fall in the quotations on opsonic therapy.

But all this of course does not mean that one and all of these methods are without value. On the contrary, each and every one has no value because invaluable. It only shows that the natural over-enthusiasm which at first is predominant, begets controversies and misunderstandings, sometimes years in dying.

Not infrequently in our medical meetings, one hears a strong emphasis on this **versus**, and it is difficult to convince some that there is not and never has been any antagonism between the man who percusses and auscults and him who works with the test tube and the cover glass. There is no royal road to diagnosis. The laboratory man no more claims to diagnose pneumonia or appendicitis by a blood count than the clinician by percussion or auscultation alone. As Dr. Sill says in the leading article of this issue: "Just as there are few pathognomic signs and symptoms, so there are few diag-

nostic laboratory examinations." In many instances, laboratory findings form but another link in the chain of evidence, either pro or con, in some instances an invaluable link, in others a less important one. Doctor Sill's plea for a closer co-operation between clinician and laboratory worker should be carefully read. It contains some thoughts worth pondering.



**The influence of the laboratory upon practical medicine** has been profound. Indeed one may almost say that the sole difference between the old-time and modern medicine is that the scientific methods of the laboratory have been introduced at the bed side of the patient. In this connection it is interesting to trace out the development of the scientific laboratory, as has been done by Welch,\* for the clinical laboratory is the natural outgrowth of those devoted to chemistry, physics, physiology and pathology.

It is generally stated that the first public scientific laboratory was that of chemistry, established in Giessen, by Liebig, in 1825. Welch, however, points out that this was antedated one year by the physiological laboratory, founded by Purkinje, in Breslau. Purkinje, whose name is familiar to us all from the corpuscles first described by him, held the first chair of physiology in Germany, established in Breslau, in 1828. One year later he opened his laboratory.

The first independent laboratory for physiological chemistry was that opened in 1872 by Hoppe-Seyler, in Strassburg.

In 1845, Thompson, later Lord Kelvin, opened a "laboratory" for the study of physics. This was in connection with the University of Glasgow and occupied an old wine cellar, which, "with the bins swept away and a water supply and sink added, served as a physical laboratory for several years."

The first pathological institute owed its being to the genius of Virchow and was opened in Berlin in 1856. Like all of the work done by Virchow, the foundation of the laboratory was on broad lines, opportunities being given for research in pathologic anatomy, experimental pathology and physiologic and pathologic chemistry.

Hygiene first found a home of its own in 1878, when Pettenkofer opened to students the Hygienisches Institut in Munich. Such a laboratory appeals perhaps the most strongly to legislators and the general public, for the results of work along hygienic lines naturally seems to the laity of the most practical importance.

These various laboratories were the prototype of those more recently established, for the study of clinical methods, the latter work-rooms being necessary because modern diagnosis demands knowledge of and skill in the use of various physic, chemic and microscopic procedures. von Ziemssen, in 1884, first put this idea into practical form by establishing in connection with his clinic in Munich, a clinical laboratory containing departments for physics, chemistry, bacteriology, and microscopy. Curschmann, in Leipzig, did likewise in 1892.

In America, the pioneer institution of this kind, housed in its own building, is The William Pepper Laboratory of Clinical Medicine opened at the University of

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\*The Evolution of Modern Scientific Laboratories.  
*Johns Hopkins Hospital Bulletin*, January, 1896.

Pennsylvania in December, 1894, although similar advantages on a lesser scale could be obtained somewhat earlier at several American universities.

Such laboratories as those of von Ziemssen and Curschmann and those of our own institutions are conducted in close affiliation with the clinical work. There is the closest possible contact between the laboratory man and the clinician. The former can never supplant the latter; indeed, as Emerson, the author of the most recent work on clinical diagnosis, puts it in quoting a former teacher of his: "The clinical chemist must be first a good clinician and second a chemist; he should remember that even from the laboratory point of view his stethoscope is of more importance than his microscope, his percussion finger than his whole outfit of chemical apparatus."



**The value of the county society** was the theme of a symposium of four papers excellently carried out at the first meeting of the Wayne County Society for the year. It is well for an organization to now and then spend an evening introspectively—to go over the object and motives of its being, to examine the causes of its failures, to find out wherein it has been lax and to agree on methods of work for the future. These papers are published in full in this issue and will repay careful reading.

The benefits of organization have been so amply proven that a discussion of them seems almost superfluous. The mere enumeration of these benefits would fill several pages. Certain points, however, in these papers will bear emphasis.

Doctor Connor brings out the point that the county society should consist of all the profession in the county. It is not, and should not be considered, in any sense, a medical club. For the older practitioner it serves as a "crucible for separating the gold from the dross in his stock of knowledge." In the society, the older practitioner can do much in teaching and helping the younger men. By no means the least of its benefits is to keep the older man in touch with the new comers, thus keeping him from growing old too rapidly.

Doctor Davis believes that the society is of more value to the younger than to the older members, for it is the formative period of the younger worker, and if surrounded by the proper environment, his ideals will be the higher and his development correspondingly great. There are many subjects, not distinctly clinical, which the younger man can develop and present even better than his elders, for he has the time to make the necessary researches. As a training school in the art of writing and speaking, the county society has no equal.

Doctor Kiefer's paper discusses the relation of the Wayne County Society to local affairs, but there is hardly a county in the state to which the points he makes are not applicable. The molding of public opinion on many of the important questions of the day is not the least important function subserved by medical organization.

Among the things done by the county society for the profession which are brought out by Doctor Tibbals, are the provision of means of acquaintanceship, the maintenance of a standard of excel-



lence, the establishment of high standards of education, the defeat of quackery and the promotion of that harmony which makes possible the application of the Golden Rule.

Everyone who listened to these short papers carried something away with him, and in order that many others throughout the state may enjoy and profit by them, they are printed in full.



**Of Alcohol as a fuel,** great things are expected. The recent action of Congress which makes denatured alcohol free of internal taxes will probably result in the more or less universal substitution of alcohol for gasoline. All kinds of vegetable waste, such as the refuse from sugar cane and sugar beet, can be employed in the manufacture of alcohol, and it only remains for a cheap process of denaturation to be discovered to bring the cost of such alcohol down to a figure which will make its use eminently practical.

At present either methyl alcohol, costing considerably more than tax free ethyl alcohol, or pyridine is used for denaturation. The latter is expensive and has a very disagreeable odor. Even should no cheaper agent be found than wood alcohol, there is still a fair margin in favor of alcohol, provided it is manufactured on a large scale.

It will be used in explosion engines the same as gasoline. As to its efficiency, authorities differ, but in the opinion of one well known authority, the saving will be some twenty per cent. The gain is due to the fact that alcohol can be compressed, without auto-ignition, to a greater extent than can gasoline and the power

derived from its expansion is therefore greater. It will also be safer because of the lower "flashing point" as compared with any petroleum derivative.

As a fuel its advantages are more familiar. It burns with a pale blue flame with no soot and little radiated heat. The latter fact makes its use comparatively free from danger as objects near the flame rarely become overheated. In case of accident, the burning alcohol can be extinguished with water, for it mixes freely with water, while gasoline merely floats on it. Moreover, alcohol has little odor, while that of gasoline is most disagreeable.



**A new State Medical Journal.** We welcome into the fold of medical journals owned by the state societies, the "*West Virginia Medical Journal*," which has just made its bow. It is published by the state society and for the present will be issued bi-monthly.

The first number is in magazine form and contains 50 pages of interesting reading matter. It is well edited and neatly printed and bespeaks great things for the future. Prosit!



Eczema of the umbilicus is sometimes merely the expression of an infected dermoid cyst at that site.



Persistent pain in an arm may be due to the presence of a "cervical rib."



Vomiting may frequently be controlled by one drop doses of tincture of iodine in water at half-hourly intervals.

## Book Notices

**Prophylaxis and Treatment of Internal Diseases.**—By Frederick Forchheimer, M. D., Professor of Theory and Practice of Medicine and Clinical Medicine, University of Cincinnati. Octavo, 652 pages. New York: D. Appleton & Co. 1906.

This work of Forchheimer, as its title indicates, is devoted to a discussion of the prevention and treatment of internal diseases. Etiology, pathology and diagnosis are not considered, the book therefore not being in any sense a "practice" of medicine. The author writes in a clear and concise style, a style which impresses one with the fact that the writer is not compiling but rather stating the results of experience. A perusal of the pages would seem to bear out the statement in the preface that it "is a compilation in so far only as it deals with the prophylaxis and treatment of tropical diseases" in which the author's experience has been lacking.

In all, 112 diseases are discussed. It is impossible to give an adequate review of the whole, but the scope of the work may be judged from the manner in which typhoid fever is discussed. Under prophylaxis the author considers, (1) Sources of infection: (a) water, (b) milk, (c) other foods, (d) patient himself. (2) Disinfection. (3) Individual prophylaxis. The vaccine prophylactic treatment is fully discussed. Under treatment, (1) specific treatment, (2) abortive treatment, (3) antiseptic treatment, (4) symptomatic treatment, (5) antipyretic treatment, (6) routine treatment. Diet is fully discussed. The abnormal forms and complications are then considered. The section ends with valuable advice concerning the management of convalescence.

The same thoroughness is noticed in all the sections reviewed.

Throughout, special emphasis is laid on methods which are applicable to private practice. Hydrotherapy, gymnastics, exercises and diet have been given a prominent place.

The work is uniform with many of the Appleton works, and leaves nothing to be desired in print, paper or binding.

**Clinical Bacteriology and Hematology for Practitioners.**—By W. D. Este Emery, M. D., B. Sc., Lond. Being the Second Edition of "A Handbook of Bacteriological Diagnosis for Practitioners." 8 mo.; 240 p. With 46 figures and 10 plates. Philadelphia: P. Blakiston's Son & Co. 1906. Price, \$2.00 net.

One of the best guides for practical work in bacteriology and hematology which we have seen

in this book of Emery. The first edition met with considerable favor and this second edition has been much improved. While the work is not as exhaustive as many others, it contains very clear and concise descriptions of the technic of the more commonly used tests. The tests recommended are those which may be used in the course of a busy practice by any one who has learned the rudiments of laboratory diagnosis.

The newer subjects such as the spirochete pallida and Wright's method of testing the opsonic index have been included.

The valuable feature of the work is that the author tells when and why to employ a test and teaches, as well as can be done on paper, what the absolute and relative values of the laboratory findings are. For this reason it is a most excellent work for the clinician.

The book is well illustrated and is a reliable guide for the subjects covered.

**A Compend of Operative Gynecology.**—Based on Lectures in the Course of Operative Gynecology on the Cadaver at the New York Post-Graduate Medical School and Hospital. By W. S. Bainbridge, M. D., Adjunct Professor, and H. D. Meeker, Instructor, New York Post Graduate School and Hospital. 12mo cloth, 76 pages. Price \$1.00 net. The Grafton Press, Publishers, New York City.

This book contains precise and systematic directions for performing all of the more common gynecologic operations.

Primarily intended as a guide for those who take the author's course on the cadaver, it is nevertheless an excellent little book to have for reference. Its teaching is in accordance with the work of the best men of the day and may therefore be safely followed.

**A Non-Surgical Treatise on Diagnosis of the Prostate Gland and Adnexa.**—By George W. Overall, A. B., M. D. 12 mo., 228 pages, 26 illustrations. Rowe Publishing Co., Chicago. 1906.

The author has taken advantage of a new edition (third) to correct minor errors and revise certain portions of the text which were not clear in the former editions. The anatomy of the parts is briefly considered and then the author's methods of treating acute and chronic prostatitis, senile hypertrophy, tuberculosis and syphilis of the prostate, and its neuroses are given. Considerable attention is given to electro-physics. Throughout, the author elucidates the points by illustrative cases.

**Saunders New Books.** Messrs. W. B. Saunders Company announce for publication in the early fall the following excellent and practical works:

Keen's Surgery, Its Principles and Practice (Volume I).

Sobotta and McMurrich's Human Anatomy (Volume III).

Webster's Text-book of Gynecology.

Hill's Histology and Organography.

McConnell's Pathology.

Morrow's Immediate Care of the Injured.

Stevenson's Photoscopy (Retinoscopy and Skiascopy).

Prieswerk and Warren's Atlas of Dentistry.

Goepp's State Board Questions and Answers.

Lusk's Elements of Nutrition.

The most notable announcement is the new work on Surgery, edited by Dr. W. W. Keen, complete in five octavo volumes, and containing over 1,500 original illustrations. The entire work is written by the leaders of modern surgery—men whose names are inseparably associated with the subjects upon which they have written.

#### Books Received.

**Clinical Diagnosis.** A Text-Book of Clinical Microscopy and Clinical Chemistry for Medical Students, Laboratory Workers and Practitioners of Medicine. By Charles Phillips Emerson, A. B., M. D., Resident Physician, the Johns Hopkins Hospital, Associate in Medicine, the Johns Hopkins University. Octavo, 641 pages, illustrated. Philadelphia: J. B. Lippincott Company, 1906. (Notice next month.)

**Philadelphia Hospital Reports.** Edited by Herman B. Allyn, M. D.

**Tigerstedt's Text-Book of Physiology.** Edited by John R. Murlin, A. M., Ph. D., Assistant Professor of Physiology in the University and Bellevue Medical College. Octavo, 751 pages, illustrated. New York: D. Appleton & Company, 1906. (Review next month.)

#### County Society News.

*To the Journal's Readers and Especially to County Secretaries:*

The Publication Committee desires to make the JOURNAL the medical newspaper of the state. We

should have more complete news of what the county societies are doing. We should have more abstracts of papers and discussions. We should have at least two pages monthly of "Michigan Personals" and "Medical News." Some county societies have been quite fully reported; others never appear. Every meeting of every society should be reported. The correspondence column is also always open. Interesting case histories are solicited. Copy should reach the editor before the 15th of the month, although insertions can often be made as late as the 25th, when the page proof is made up.

#### UPPER PENINSULA MEDICAL SOCIETY.

The upper Peninsula Medical Society, which comprises the twelfth district of the State Society, held a very successful meeting at Escanaba, August 2nd and 3rd.

The following program was enjoyed:

THURSDAY, AUGUST 2nd.

City Hall, 9:30 a. m.

Introduction.....  
 ..Geo. Bjorkman, Pres. Delta Co. Med. Society  
 Invocation.....Rev. P. B. Ferris  
 Address of Welcome.....Mayor M. Perron  
 President's Address, "The Physician and the Medical Society". Pres. A. I. Lawbaugh, Calumet  
 Menominee County—  
 "Typhoid Fever"....B. T. Phillips, Menominee  
 Delta County—  
 "Report of Fatal Case of Typhoid".....  
 .....Geo. Bjorkman, Gladstone  
 Schoolcraft County—  
 "Summer Diarrhoeas". J. M. Sattler, Manistique

ADJOURNMENT UNTIL 1:30 P. M.

Houghton County—  
 "Report of a Successful Case of Caesarian Section".....C. H. Rodi, Calumet  
 Delta County—  
 "Surgery of the Appendix".....  
 .....A. L. Laing, Rapid River  
 Houghton County—  
 "A Plea for Greater Surgical Interest in Obstetrics".....E. T. Abrams, Dollar Bay  
 Marquette County—  
 "Affections of the Gall Bladder"—A Plea



for a More Thorough Knowledge of a  
Common Disease".....

.....A. W. Hornbogen, Marquette

7:30 a. m. Boat Ride on Little Bay de Noque,  
calling at Cleveland Cliff Co. Furnace, thence  
to Gladstone.

Banquet at Hawarden Inn, 10 p. m.

FRIDAY, AUGUST 3rd, 9 A. M.

Business Meeting.

Menominee County—

"Indications for Enuclation".....

.....C. R. Elwood, Menominee

Delta County—

"Report of Case of Imperforate Anus"

.....J. O. Gross, Escanaba

Automobile and carriage drive about the city,  
taking in the ore docks, ore crusher, wooden-  
ware factory and I. Stephenson Co. plant.

At the business session held on the 3rd it was  
decided to hold the next annual meeting at Me-  
nominee and the following officers were elected:

President, Dr. A. F. Snyder, Escanaba.

First vice president, Dr. B. T. Phillips, Menom-  
inee.

Second vice president, Dr. C. H. Rodi, Calu-  
met.

Secretary, Dr. Robt. A. Walker, Menominee.

A permanent legislative committee was appoint-  
ed, consisting of one member from each county  
society, whose duty it is to urge all matters of  
a legislative nature relative to medical legislation.

The following committee was appointed:

Marquette—G. G. Barnett, Ishpeming.

Houghton—Geo. W. Orr, Lake Linden.

Chippewa—Wesley Townsend, Sault Ste. Marie.

Gogebic—Edw. H. Kelley, Ironwood.

Dickinson—Jos. Crowell, Iron Mountain.

Schoolcraft—J. M. Sattler, Manistique.

Delta—A. F. Snyder, Escanaba.

Menominee—Walter R. Hicks, Menominee.

There were about 50 physicians in attendance.

H. W. LONG, Sec'y.

## CALHOUN.

The third quarterly meeting of the Calhoun  
County Medical Society was held in Battle Creek,  
Tuesday, Sept. 4, 1906. A good sized audience  
was in attendance. Measures were taken and

committees appointed to make Dr. McCormack's  
October visit to Battle Creek a success. Articles  
of association and new by-laws were adopted and  
the society is now a corporate body.

The program—a symposium on pneumonia—  
was thorough, practical and scientific and pro-  
voked a general discussion.

It was as follows:

**Etiology and Bacteriology**, A. W. Nelson,  
Battle Creek.

**Pathology**, Wilfrid Haughey, Battle Creek.

**Symptoms and Diagnosis**, Geo. C. Hafford,  
Albion.

**Treatment**, A. H. Burleson, Tekonsha.

A. W. Alvord, of Battle Creek, led the dis-  
cussion and was followed by J. H. Kellogg, Chas.  
E. Stewart, A. F. Kingsley and R. M. Gubbins.

The meeting adjourned to Battle Creek, Dec.  
4, 1906, at which time the society will hold its  
annual meeting and banquet, as guests of Dr.  
Kellogg.

A. S. KIMBALL, Sec'y.

## HOUGHTON.

At the annual meeting of the Houghton County  
Medical Society the following officers were elect-  
ed: President, Dr. C. H. Rodi, Calumet; vice  
president, Dr. W. P. Scott, Houghton; secretary-  
treasurer, Dr. Chas. W. Yarrington, Calumet;  
censor for three years, Dr. W. T. S. Gregg, Calu-  
met.

C. W. YARRINGTON, Sec'y.

## OTTAWA.

The Ottawa County Society has adopted a  
uniform fee-bill, which has gone into effect and  
which all the doctors of the neighboring country  
have signed, members and non-members, and  
which all say they will stick to. At our next  
annual meeting in October, we expect to take in  
several new members.

E. D. KREMERS, Sec'y.

## WAYNE.

The Medical Section met in the Turkish room  
at the Hotel Cadillac, Monday, September 10,  
1906. In the absence of the chairman, Dr. Car-  
stens presided. The program consisted of a  
symposium on the "Value of the County Medical  
Society." The papers are published in full.

## WHAT VALUE HAS THE COUNTY MEDICAL SOCIETY TO THE OLDER PRACTITIONER.

LEARTUS CONNOR, M. D.

For purposes of this discussion, we shall define the older practitioner as one firmly established, able to earn his living and save a comfortable surplus. He is neither a past or coming practitioner but a present one—the present one. He has graduated from the class of younger practitioners and is a candidate for the oldest one—so is free from both the friskiness of the former and the fixedness of the latter.

It is well for us to agree on what constitutes a County Medical Society.

1. It is not a *medical club*—black balls are no part of the County Society—only the majority voting in open meeting prevents the admission of applicants for membership. In their place medical clubs are of great value, but they are no part of a county medical society.

2. It is not "*a holier than thou society*"—its membership does not claim a past without faults, a spotless present, or a monopoly on all virtues of the future. Such immaculate (in their own esteem) societies have been and still are—since Pharisees linger on the earth.

3. It is a society of the *entire* medical profession in a county. If individuals fail of being reputable, it seeks to place about such the conditions for becoming reputable, and when the process is fairly started, takes them into membership. So long as a single legally qualified physician, within the limits of a County Society, is without its membership, so long the Executive Committee has work undone.

The question now fairly before us is "what value has a county medical society to the older practitioner?"

We shall assume that the type of which we speak, is well educated generally, as well as professionally, that he is fair minded, and seeks to do his best for patients, fellow practitioners and the people, and fails not to keep step with the advance of his calling.

The value to such of his county medical society has many factors varying in importance, to individuals at different periods of life, but time forbids but brief reference to only a few.

First—The county society augments the knowledge of the older practitioner in many directions.

He is quite unable to master the vast field of medicine and surgery. Others study along other lines, read different books, have different experiences, from which at the society meetings they present varied ideas, and make unthought-of practical suggestions. Negatively, incorrect statements, illogical reasonings by fellow members increase knowledge by compelling farther research to remove the awakened doubt. Hence one who has attended county medical society meetings without being conscious of an indebtedness thereto for not an inconsiderable amount of his equipment of practical, proved knowledge, surely fails to keep tab on the source of his stock in trade.

Second—The knowledge which the older practitioner acquires needs trimming, readjusting, condensing, and there is no method more effective than the county society. Let him present the society with papers or specimens, report cases, discuss other papers, specimens or cases, and he will find that his own stock of knowledge is often incomplete, inaccurate or misleading. Thus the county society is a *crucible* for separating the gold from dross in the older practitioner's stock of knowledge. The more isolated his work, the larger his success, the greater his self confidence, the more does he need this refining service of the county society.

Third—Not every doctor has a chance to teach students in a medical college and be advertised by college circulars, advertisements, etc., but the older practitioner can teach the members of the county society, more or less at every meeting and be advertised by its published proceedings and papers. The teaching skill thus acquired is of great value in explaining to patients or their friends, the nature of their ailments and the best methods for giving relief. The ability to think clearly while standing and speak forcefully, is of infinite value, not only in professional gatherings, but those of the laity. From lack of acquiring this ability offered by the county society to every member, not a few fail of doing to others or securing for themselves the best things in a professional career. Too many forget that the M. D. degree means teacher of medicine, as well as practitioner, and neglect to cultivate the teaching power equally with the practicing. Because the majority of the profession teach the laity so little, they give it little confidence and scant courtesy. The great need of our age is doctors who can and will teach the people that which they ought to know relative to their physical existence; teach towns, cities, states and nations how to conduct their affairs so as to be healthful,

strong and prosperous. The county society is a training school for the older practitioner, who really desires to be a teacher of medicine in its truest and noblest sense—by assisting him to think more logically, speak more accurately and write more persuasively.

Fourth—The county society makes it easier for the older physician to obtain a better knowledge of his fellows. These constantly change; some arrive, others depart, all are shifting residence, office, methods of work, habits, personal or professional—each is different from the other, in ways partly open and partly hidden.

With any one of these he is liable to be called into close professional relations. If familiar with the personal equation of each, such relations are more apt to be mutually profitable. Across the street, a physician may appear discreditable but near at hand commands respect. The county society brings the older practitioner so close to every other doctor in his county that he is measurably protected against errors of judgment, when first meeting him at the bedside. All thoughtful persons recognize in the mutual ignorance of doctors, a most fruitful source of local squabbles, that have done so much to discredit the medical profession.

Fifth—The county society furnishes the older practitioner an unrivaled chance to become great by being the *servant* of all members. Standing midway between the youngest and oldest the older practitioner can do much to unite the two in thought and action and so perfect the oneness which is the keynote of the county society. This service rendered so quietly that only the most observant perceive it, done in season and out, to the wayward as well as the shining light, the ignorant and the learned, the humble as well as exalted, done by timely word, kindly act or gentle reproof, done not for self glorification, but to promote the growing of a better professional life, is the food on which the older practitioner may grow to the largest professional life possible to one of his natural ability and environment.

Sixth—Many years since the writer heard a successful practitioner lament that he had few friends among young practitioners. Had he been active in his county society such lament could not have been made, because he would have met these, one by one, as they appeared in the society, and formed many lasting friendships. The mutual interchange of kindly acts would have pre-

served his elasticity and brightened life's decline.

Seventh—An atmosphere of kindliness, honor and mutual helpfulness is necessary for the best growth of the older practitioner. Such atmosphere can be best created and sustained by a properly conducted county society. In it the older practitioner will grow old less rapidly; in it he will find the stimulus for his best work; the worry of practice will be at a minimum and the joy from good work deftly done, at a maximum.

Thus we have enumerated seven value-factors of the county medical society out of the dozens that might have been listed—all furnishing potent reasons why the older practitioner should be most earnest in promoting his own society. These are:

1. His society will increase his knowledge of the medicine written in books, medical journals or society proceedings.

2. It will broaden his knowledge of his fellow doctors—a most important equipment of every practitioner.

3. It will reveal himself to himself in many ways, so substituting attractive modesty for arrogant conceit.

4. It is a crucible for refining his studies, his observations, his thinking, thus augmenting their practical value.

5. It aids in developing his capacity to teach—his patients, their friends, fellow doctors or the laity. To think logically, write clearly and speak, while standing, convincingly, is absolutely essential to the older practitioner's highest power.

6. It gives him a chance to work for all his fellow practitioners and so attain the largest individual growth—in accord with the Master's dictum: "He that would be the greatest among you, let him be the servant of all."

7. It creates an atmosphere of kindliness, necessary for the older practitioner's richest life.

8. It gives him friendly alliance with youthful exuberance behind and matured judgment before, essential for the rounding out of the most perfect professional career.

Finally the elder practitioner, who would reap the richest harvest from his county medical society, will seek to do something for it, as well as get something from it.

The second paper was by Dr. Davis.



## THE VALUE OF THE COUNTY MEDICAL SOCIETY TO THE YOUNGER PRACTITIONER.

JAMES E. DAVIS, M. D.

Our distinguished American diplomat, Andrew D. White<sup>1</sup> has written this comment upon Russia's most noted litterateur: "Of all distinguished men that I have ever met, Tolstoi seems to me most in need of that enlargement of view and healthful modification of opinion which come from meeting men and comparing views with them in different lands and under different conditions."

The enlargement of view and healthful modification of opinion are as much needed by the physician as the literatist. The young physician will doubtless attain unto broader vision and safer opinions in due proportion to the extent of his personal experience in the direct practice of his profession, yet like Tolstoi he will, though known to all the world, have need of meeting men for comparison of views.

"It is to the glory of medicine that its doctors are united in a single aim,—the alleviation of physical suffering; and it is to the honor of this profession that there exists among its members in every nation a splendid sympathy and disposition to mutual helpfulness. Every medical community freely brings its knowledge and the products of its experience, and adds them to the common store, dedicated to the service of humanity."<sup>2</sup>

The transactions of a society present the index of medical progress in the community and afford opportunity of closer touch with the work of one another, thereby fostering the ideal of the highest possible standard of equipment for the prosecution of the work and duties of the profession.

The local medical society is of greater utility to the younger than the older practitioner. It is yet the formative period with the younger worker. He is testing for first hand truth by trying out the numerous theories heard from varied sources.

Many of the fads advocated with such vehement enthusiasm are proving useless or impractical. The dicta of the most beloved text books are found inadequate and often untrue. The positive and zealously advocated teachings of the most brilliant in the professorial chairs come to naught when set over against a newly discovered truth. It is impressed upon his mind that science

refuses to accept, unless accompanied by proof, the dicta of any master. A notable example of the truth of this is found in the oration given by Mr. Erichsen at the opening of the University College Hospital at London in 1873. In an address on the *Finality in Surgery* he said:

"There must be a final limit, the knife cannot always have fresh fields for conquest. That this limit has nearly, if not quite, been reached will appear evident if we reflect upon the great achievements of modern operative surgery. *Very little remains* for the boldest to devise or the most dexterous to perform."<sup>3</sup>

Almost within gunshot of where Erichsen stood when delivering this oration, Lister was revolutionizing surgery by his remarkable work in a sepsis and antisepsis. On the continent at this same time, Billroth and his pupils were demonstrating the successful removal of the larynx and the pylorus. Mr. Erichsen was at that time justly considered to be one of the foremost of living British surgeons.

There is no finality in any branch of medical science. There is constant progress. To keep abreast of this progress would impose the dictum of Lord Brougham. "Read everything of something and something of everything." This is obviously impossible, but the transactions of a good society suggest a sort of clearance house where free exchange can be made of negotiable medical specie.

If the younger member has most time for reading, he can with his *Index Medicus* ascertain the progress of the world in the subject up for discussion and though an Erichsen may make a *pronunciamento*, some young man may contravert the facts stated, if not in harmony with recently discovered truth, and his listeners have the truth for its hearing.

It is a frequently heard comment that the younger members of the medical profession lack self confidence and consequently fail to inspire the confidence of those who employ them. The effect of active membership in a good medical society is to aid the honest and earnest man to that professional poise of manner and discipline of knowledge and character that will engender *quiet self respect* which is the basis of all confidence. The poorly equipped and inefficient man is face to face with his shortcomings at least once a week in the local medical society and this is nearest to attending school again.

The business phase of the practice of medicine has been the undoing of many splendidly educated young physicians. In the community is

a doctor of very inferior qualifications whose practice is wonderfully lucrative. His type is found in almost every medical society, though this is not his natural habitat. He is known to some as a "jiner," for he belongs to all the lodges, great and small. He is in the vernacular of the day—a business getter. Strange as it may seem to many scholarly young practitioners there are some lessons especially profitable to be learned from this kind of man. Oxenstiern's famous utterance: "Go forth, my son, and see with how little wisdom the world is governed," is replete with suggestion upon this point.

It is said that the value of the local society is limited for the younger members, because it is usually the same men who read papers year after year. The fault of this is with those who do not present papers, for all are solicited alike to contribute.

Many young physicians say they have nothing to write about while their experience is so limited. This certainly would be true in most instances if clinical papers only were acceptable. The dictum of the critic Carlyle that "men should defer work in literature until they really have some worthy message to deliver," has been wrongly taken to mean defer literary work until a rich experience has been acquired. A worthy message may belong to the most recent graduate or even the undergraduate.

Two of the most interesting contributions to the medical literature of 1906 are upon such subjects as any young man might use for a very worthy message, viz.: "Dr. Garth, The Kit-Kat Pot," by Harvey Cushing, M. D., and "Laron Larrey: A Sketch," by J. Chalmers Da Costa, M. D., published in the January and July numbers of *The Bulletin of The Johns Hopkins Hospital*.

It is said by many good critics that few physicians learn well the art of writing. One critic pointedly remarks: "Few only attain to a respectable facility in the expression of ordinary ideas."

The impression prevails with many that public speaking is more difficult than writing. Yet the speaker has at command all the resources of gesture, of look, accent, tone, mien. But with all these advantages, few men in this society would feel satisfied with his diction when transcribed to paper. The county society is an opportunity at the very door of our young men, where the art of speaking and writing can be improved.

Arlo Bates says "The devils of incoherence, obscurity and incompetency go not out save by

untiring striving and watching." In other words the way to learn to write is to write or a better way to learn to write is to rewrite.

No literature can go far or effect much which does not call suggestion to its aid. A thorough discussion of the papers read before our society will prove invaluable to not only their writers, but to those taking part in the discussion as well as to the hearers.

One of our most noted statesmen has said, "The man I don't like is the man I don't know." An invaluable means for acquaintance with our colleagues is afforded in these weekly meetings, for in due time a careful observer will know quite accurately the professional and general character of all who attend. It is according to opinions here formed that we will select our consultants.

After all that can be said of the value of the county society to the younger practitioner, individual temperament and individual purpose must in the end determine, for education is a unit.

1. *Autobiography*, vol. ii., p. 84.

2. *New York State Journal*, Ed., March, 1906, p. 130.

3. *Lancet*, Oct. 4, 1873.

4. *Pleasures of Life*, Lubbock, pt. 1, p. 63.

5. *The Art of Writing*, p. 11.

## THE VALUE OF THE COUNTY MEDICAL SOCIETY TO THE COMMUNITY.

G. L. KIEFER, M. D.

The value of the county medical society to the community is best expressed in Article II. of the constitution under the title "Purposes of the Society," as follows: "The purpose of this society shall be to bring into one organization the physicians of this country; and by frequent meetings and full and frank interchange of views to secure such intelligent unity and harmony in every phase of their labor as will elevate and effectuate the opinions of the profession in all scientific, legislative, public health, material and social affairs, to the end that it may receive that respect and support within its own ranks and from the community to which its honorable history and great achievements entitle it."

If we have lived up to and conscientiously carried out this purpose of our organization there can be no question but that the county medical society has been of inestimable value to the community; if, on the other hand, we have fallen short of this purpose in some respects, let us begin now to make up for lost time so that, as the constitution says, we may receive that respect and support from the community to which we,

as a society, are entitled.

Have we in the past labored along all the various lines laid down in the article of our constitution above cited? Frequent meetings have been held at which scientific medical questions have been considered, but how much attention has been paid by the society as such to legislative and social problems and matters pertaining to public health? As one of our purposes is to encourage a "full and frank interchange of views," I will endeavor to be frank in my brief consideration of this subject. Several years ago the question of a general vaccination of the City of Detroit was before the Common Council inasmuch as an appropriation for that purpose had been asked for by the Board of Health. The Committee on Health of the Common Council referred the question to the physicians of the city and a largely attended meeting of the Wayne County Medical Society was held in the Council Chamber. After a discussion of the question, a resolution was unanimously adopted endorsing the position taken by the Board of Health in asking for an appropriation for a general vaccination. This action on the part of the society had much to do with the subsequent allowance of the appropriation by the Common Council. The vaccinating was done and smallpox soon disappeared from our city. Surely this is one instance in which the county medical society was of value to the community.

Again, the following year, the society took up the question of improving the milk supply of the city of Detroit. It was decided, after careful consideration of this subject, that the best results could probably be obtained by the appointment of a "Milk Commission," whose special duty it would be to co-operate with the Board of Health in its efforts to improve the general milk supply of the city and to take such other steps for this purpose as might seem advisable. The Milk Commission of the Wayne County Medical Society was accordingly appointed, but little has been done along its line of duty. This inactivity is, however, the fault of the commission and not of the society. In New York much has been accomplished by the Milk Commission of the Medical Society of the County New York, and good work has been done by the Milk Commission appointed in Philadelphia by the Philadelphia Pediatric Society. This question is one that might well be further considered by the society and further action in this respect would undoubtedly be of value to the community.

Last year steps were taken by the Wayne Coun-

ty Medical Society to limit the spread of venereal diseases. A public meeting was held, the object of which was to arouse the public by making them acquainted with some of the terrible facts resulting from the prevalence of venereal disease in this community. The meeting, which was the first of the kind ever held, was largely attended and the interest aroused in the audience was great. The action taken by the meeting was the appointment of a committee to further this good work. Too much cannot be said in favor of this action by the society which was begun and pushed to its execution by last year's President, Dr. Carrier. Indeed, nothing could be undertaken by the organized medical men of any city which would prove of greater value to the community.

I have cited some of the questions pertaining to "legislative, public health, material and social affairs" that have been considered by the county society, now let us look at some other problems that might receive the attention of the society if it is desirous of being of greater value to the community. First and foremost is that greatest of all medical, social and public health problems—the restriction and prevention of consumption. This question has up to the present time received little or no attention from the county medical society, although it is clearly our duty to take hold of the problem if we are to carry out the purposes of the society as laid down in the constitution. In order to limit the spread of tuberculosis the very first thing necessary is the notification of cases. In the state law, as it now reads, requiring physicians to report certain diseases, consumption is not specifically mentioned. The law makes it compulsory for physicians to report cases of "smallpox, scarlet fever, diphtheria and any other diseases dangerous to the public health."

Several years ago the Board of Health of Detroit determined that tuberculosis is a disease dangerous to the public health and required its notification. Some physicians refused to report their cases and were prosecuted. The question has never been settled and progress against the spread of the disease has, as a consequence, been impeded. If it is one of our purposes to take up these subjects why should not the society take some action looking towards the systematic reporting of these cases in Detroit so that the Board of Health might make greater headway in its uphill fight against tuberculosis, by knowing where the cases are located. This would give the public health authorities the opportunity



of at least furnishing householders with proper instructions about the restriction of tuberculosis and the further opportunity of disinfecting the premises in case of removal of the patient from one house to another. Surely such action would be of value to the community.

What I have said about reporting cases of consumption applies equally well to typhoid, measles and other diseases not specifically mentioned in the law.

Referring again to the endeavors on behalf of the Board of Health to restrict consumption, I am reminded of the tuberculosis exhibit recently held in this city. The exhibit was brought here by the city, money having been allowed for the purpose by the Common Council upon request of the Board of Health, and the work of arranging a program and carrying it into effect was done by a committee of physicians appointed by the Board of Health, all members of the Wayne County Medical Society. One of the first things considered by the committee was how to obtain the co-operation of the profession. It was unanimously decided to send a personal letter to each member of the Wayne County Medical Society asking his co-operation by his attendance at meetings and in every other possible way. A special opening meeting for physicians was arranged, and of the 450 appealed to, about twenty responded. More than that, the doctors were conspicuous by their absence throughout the entire week, and I have even been told that one of the older members of the society has been saying that the tuberculosis exhibit was "a political move on the part of the Health Officer and some of his friends to advertise themselves." Here was an opportunity for the society to carry out one of its purposes by getting a larger number of people to attend the meetings in connection with the exhibit and thus become of greater value to the community.

Another question that is under consideration at the present time and which is of value to the community is the erection and maintenance by the city of a hospital for contagious diseases. The sum of \$100,000 has been allowed for this purpose and a site has been purchased, but further progress has been stopped by a temporary injunction being granted to prevent the erection of the buildings for such an hospital on the ground that its maintenance would be dangerous to the people living in that vicinity on account of the spread of disease from the hospital through the atmosphere. It is not intended to admit smallpox patients to the hospital, but

cases of scarlet fever, diphtheria, measles and other contagious diseases are to be received. 'Certainly none of our citizens know better than the physicians that there is no danger from such an institution when properly conducted, and consequently it might be proper for the medical society to consider this question and take some action which would hasten the erection of this hospital so much needed in Detroit. I am sure such action would be of value to the community.

It would be possible to enumerate a number of other questions that might be taken up by the society, but the time allowed for this paper is more than exhausted.

In conclusion I desire to say that the organization of the physicians of this county into one society for the purposes as stated in the constitution, has been of value to the community and it can be made of greater value by a little effort on the part of its members.

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#### THE VALUE OF THE COUNTY MEDICAL SOCIETY TO THE MEDICAL PROFESSION.

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F. B. TIBBALS, M. D.

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We have considered the value of the county medical society to its members, both young and old, and to the non-medical community and have now to briefly outline its value to the medical profession as a whole.

Of the population of the United States, one or possibly in some communities, two out of every thousand are practicing physicians, locally, a small percentage, but totaling a large number of men with similar aims, objects and occupations. No body of men, except the clergy, wields so large and disinterested an influence for the public welfare. This is so because physicians as a class are educated men, whose work brings them into intimate relations with all the people, who consequently look to them for advice and guidance along social, moral and hygienic lines. This responsibility to others which is fundamental in our profession, may be tacitly taken for granted but besides the duty each physician owes his fellow men, there is a duty which he owes himself and family—namely to get for himself and for them his fair share of happiness and his just

proportion of the emoluments which add to the joy of living and sweeten old age.

How can he best do this? We answer, by associating himself together with his coworkers in the local or county society. The advantages of such association are both mutual and individual. Individually, each man profits by social acquaintance with his fellows and by imparting to and receiving instruction from them, and mutually each individual is a sharer in the common weal of his profession. An overcrowded profession and low fees affects each individual, the converse being true as well.

What then does the county society do for the profession?

It provides the best means of social acquaintance and mutual instruction for its members, uniting in bonds of fellowship, workers in a common cause.

It maintains a standard of excellence which upholds ethics and morals, decries and discourages violation thereof and thus uplifts the morale of the entire profession.

In the exact ratio of its strength and activity will the county society impress itself upon the community and thus aid the profession, because the profession always benefits by enlightened, intelligent understanding of its aims and objects.

In the demand for pure food, pure drugs, sanitary surroundings and the prevention and restriction of communicable diseases, including those of venereal origin, the profession has taken the lead in creating public sentiment, actuated solely by the disinterested motive of bettering the body politic, and yet the seeming paradox that the profession, in working for the benefit of the laity benefits itself, is nevertheless true.

In demanding a high standard of education as a prerequisite to practice, in opposing quackery, illegal practices and obscene advertising, the profession works directly for the benefit of the laity, but indirectly profits thereby because better educated medical men means a pleasanter, and possibly lessened, competition, while the suppression of the quack and "nasty" advertiser protects the public from fraud and drives them, of necessity, to the honest practitioner. After all, the most important thing which the county society does is to promote harmony, good feeling and *esprit de corps* among the profession, thus protecting the individual against an otherwise unfairly sharp competition. Universal good fellowship means universal application of the Golden Rule, which does not admit of backbiting, misrepresentation or damaging allegations regard-

ing a competitor, and we are all competitors, for no one of you has ever seen a doctor too busy or too rich to take other patients, but so long as he treats you and me fairly let him have them. There will still be some left.

Through the aid of the county society the doctor who is unfair becomes a marked man and unless born with the devil in him, reforms rather than end his days labeled "unclean."

Thanks to the good feeling now existing in the profession, the great menace of the doctor, the blackmailing damage suit is much less threatening than formerly, for with unity and harmony existing, the unkind word of criticism from a brother practitioner which suffices to incite these cases is wanting. Moreover, when the profession is united, united action in resisting these unfair demands becomes possible.

The regular profession should go a step farther and admit to membership in the county society every legally licensed practitioner who is decent in his practice. The day of pathies and sectarianism in medicine is past and all physicians should be united in bonds of fellowship for the common good.

Of the work of the combined county societies of the United States as carried out by their representative bodies, the state societies and the American Medical Association, it is perhaps hardly my province to speak, yet I cannot forbear to call your attention to the vast amount of good work being done. The adjustment of the insurance examiners's fee, the suppression of the patent and proprietary medicine evil, the regulation of medical schools, the establishment of interstate reciprocity in licensure, and the recent legislation of various states for the limitation of abuses and the betterment of the profession, all speak volumes for the efficacy of the organization of which the county society is the hub of the wheel.

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In opening the discussion, **Dr. T. A. McGraw** said: No reasonable and unprejudiced man can doubt but that the organization of the county, state and national bodies is the best which has ever taken place. It is frequently most important that the profession should act as a unit to produce certain effects. This action must sometimes be taken through the board of health and sometimes through political channels. When all of the legalized profession is thus fused, its influence is tremendous. This is but one aspect of the county society.

In regard to the young practitioner, it is most important that he be properly influenced, for upon this depends whether or not the profession in the future shall be actuated by high or low ideals.

Dr. Davis said that the young practitioner is often timid about speaking. In one way this is an advantage, for he is put under a discipline. He ought not to speak unless he has something to say, but it is his duty to have something to say. Medicine is replete with unsolved questions, and it should be one of the functions of the county society to impose such tasks upon the younger members.

**Dr. H. D. Jenks** emphasized the advantages of the fellowship which the county society engenders. Through it the new comer can become known. It is also invaluable for the information which can be there obtained.

**Dr. E. H. Hayward** spoke of the good work which might be done along the line of influencing public opinion regarding dust, smoke and spitting.

**Dr. S. G. Miner** said that the value of organization is known to all. The time is passed when individual effort can accomplish much. This is recognized by the labor unions, by the patent medicine proprietors, by charlatans and by the medical advertisers. We must have the confidence of the people, and to achieve this we must be as near perfection as possible. This we cannot approximate without unity.

**Dr. W. J. Wilson, Jr.**, emphasized the necessity of supporting and remaining loyal to the American Medical Association.

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## Michigan Personals

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Dr. and Mrs. A. G. McLeod, Calumet are in Scotland.

Dr. James A. Ardiel, Grand Rapids, has returned from a two months' trip to Great Britain.

Dr. Frederick McOmber, Berrien Springs, who has been seriously ill with heart disease, is reported to be improving.

Dr. Fanny L. Draper, Jackson, will sail this month for Foo Chow, China, to take charge of the Methodist Hospital.

Edward Spanner, Lansing, has given an operating room and heating plant to the Women's

Hospital and has in addition, provided for the grading and beautifying of the grounds.

Dr. Guy C. Keller has located at Assyria.

Dr. A. R. Williams has entered practice at Jackson.

Dr. S. Sudrawski has been unanimously elected chairman of the Public Health Department of Manistee. The board is making arrangements for a systematic school inspection and is considering the appointment of an instructor for the schools in hygiene and bacteriology. On assuming the chairmanship Dr. Szudrawski presented an able address on "Science the Best Hope," in which he set forth what he believes should be the activities of the department.

Dr. William McCallum of Gladstone has removed to Minneapolis.

Dr. L. N. Yerkes has removed from Gladstone to Bay City.

Dr. Andrew Nelson has located in Escanaba, having removed from Manistique.

Dr. L. M. Power has entered practice in Gladstone.

Dr. P. J. Livingstone has left Caro and after a year of study will locate elsewhere in the state.

Dr. S. S. French of Battle Creek celebrated his ninetieth birthday August 25.

Dr. P. M. Hickey of Detroit has been honored by being elected president of the American Roentgen Ray Association.

Dr. L. Lundwell has located in Iron Mountain.

Dr. J. C. Tufford, formerly of Owosso, has located in Detroit.

Dr. L. P. Freiber has located in Escanaba.

Dr. Wilfrid Haughey, Detroit College of Medicine, 1906, has entered practice in Battle Creek.

Dr. H. H. Sanderson has removed his office from Windsor to Detroit.

Dr. C. D. Aaron of Detroit is the new president of the Northern Tri-State Medical Society.

Dr. Victor Yale has moved from Deerfield to Sault Ste. Marie.

Dr. Ralph Engle has opened an office in Petoskey.

The State Board of Registration has appointed Dr. W. L. Stuart a member of the board of preliminary examiners.

Dr. G. S. Field of Detroit has returned from Europe.



## Marriages

C. Maurice Stafford, M. D., to Miss Fannie S. Cotton, both of Detroit, June 26.

V. D. Farmer, M. D., Parma, to Miss Grace Dutcher of Jackson, August 14.

Patrick J. Sullivan, M. D., to Miss Malvina Moran, both of Muskegon, August.

James M. Cooper, M. D., Detroit, to Miss Hattie Craft of Grass Lake, August 22.

C. W. O'Brien, M. D., Wyandotte, to Miss Florence I. Ellis of Maitland, Nova Scotia, August 21.

R. A. Rish, M. D., Pellston, to Miss Grace Owens of Bellaire, August 16.

A. H. Gorenflo, M. D., Detroit, to Miss Hattie Clippet of Wyandotte.

## Deaths

James M. Stringham, M. D., died at his home in Carson City, July 20.

Donald A. Link, Volinia, was accidentally drowned in Moon River, near Ravenhurst, Ont., August 15.

W. T. Cody, M. D., died in Toronto General Hospital, August 28, a few hours after an operation for brain tumor.

Dr. C. E. Howland of Adrian died September 1, aged 75 years.

## Obituary

### DAVID V. YEREX, M. D.

Dr. David V. Yerex died in Harper Hospital, Detroit, from shock, an hour after an operation for removal of a cancer of the colon.

Dr. Yerex was born near Picton, Ont., April 21, 1845, and was a few months over 61 years when he died, Aug. 27, 1906. Graduating from Bellevue Medical College in 1869, he came to Lapeer county over 40 years ago, first locating at Black's Corners, he later moved to Imlay City, where he practiced over 30 years.

Dr. D. V. Yerex was a man of strong personality and sterling qualities. By thrift and indus-

try he accumulated considerable property.

As a physician he was a careful diagnostician and a successful practitioner. He has held many offices of trust, as administrator of estates; was mayor or village president of Imlay City for five consecutive terms. At the time of his death he was one of the superintendents of the poor for Lapeer county. A widow, and one son of 15 years, survive him.

He was a regular attendant of the medical societies and at his funeral the Lapeer County Medical Society attended in a body. The funeral services were under the auspices of the Masonic Order.

H. E. RANDALL.

## Correspondence.

Austin, Texas, September 5, 1906.

Dear Colleagues:

We have the honor to inform you that we are instructed by the Committee on Invitations to advise you that your body is cordially invited to send delegates to the meeting of the American International Congress on Tuberculosis to be held in the City of New York, November 14, 15 and 16, 1906, next, and to send a list of the same as soon as convenient to the Secretary to enable our Committee to arrange for a reduced transportation for the same.

It is highly desirable that the efforts of Sanitarians and of all enlightened Humanitarians, lay and professional, should be unified and concentrated in the endeavor to limit the spread, and, as far as may be possible, to remove the causes of the great scourge of the human family.

There is and should be no spirit of rivalry; all the organizations for this laudable work should co-operate for the accomplishment of the great end sought.

With assurances of high esteem and regard and an earnest desire that every organization interested or engaged in this conflict with tuberculosis may combine their efforts in a common cause, we remain,

Very faithfully yours,

F. E. DANIEL, M. D.,  
President, Austin, Texas.

MATTHEW M. SMITH, M. D.,  
Secretary, Austin, Texas.

CLARK BELL, LL. D.,  
Treasurer, 39 Broadway, N. Y.

H. EDWIN LEWIS, M. D.,  
Vice-Chairman of Council,  
100 William St., New York.

## Progress of Medical Science

### MEDICINE.

Conducted by

T. B. COOLEY, M. D.

**The Therapeutic Value of Lecithin.**—LANDSBERG's exhaustive review of all the literature concerning lecithin is of interest in view of the present exploitation of this substance and of various preparations supposed to contain it or its compounds by various drug firms. He treats first of its chemistry and its functions in normal metabolism, and then, of the experimental and clinical evidence as to its therapeutic value. He concludes that lecithin has an undeniable value in many forms of secondary anemia—often where iron has proved to be of no benefit. There is nothing in the literature regarding its effect on pernicious anemia. This effect in the anemias is to be attributed, partly at least, to the stimulation of normal metabolism which seems to be the chief physiological effect of lecithin.

In the other cases where favorable results have been obtained from this drug, and the list of diseases is long, it seems certain that its good effect came from the correction of a sluggish or disturbed metabolism, and that no such specific action as has been claimed can be attributed to it. The effect on metabolism should make it valuable in rickets, but clinical results have not been convincing. It has been of use in the inanition of infancy.

The indications for its use are, therefore, the presence of a secondary anemia or defective absorption or assimilation of fats or proteids. In most cases it is best given raw as yolk of egg, which contains a high percentage of lecithin, but for infants, the pure drug added to the milk is better. For subcutaneous injection, solutions in oil are best borne. *Centralbl. f. d. Phys. u. Path. d. Stoffwechsels*, April, 1906.

**Epidemic Miliaria.**—SCHOLTZ reports his observations during a recent outbreak of this rather uncommon disease, with an analysis of 32 cases. The outbreak occurred in a rather poor district, with unhygienic surroundings and dwellings, and a doubtful water supply. There were in all 125 cases, with 21 deaths. Children, in spite of constant exposure, were not affected, and most of the patients were persons in middle life.

The disease is divided into three stages. 1st. Fever and sweating; 2nd. Eruption; 3rd. Convalescence. A prodromal stage is not always present.

A few patients were seized suddenly with fever, violent sweating, and great prostration. Most often the onset was gradual. Often there were prodromal symptoms of general malaise, etc.,

from two to six days. Chills were common; also epigastric pain. The usual onset of the acute attack was with chills or fever, and extreme sweating, so that patients had to change clothing as often as seven times in one night. The sweating lasts from three to six hours, to recur after varying intervals, with the preceding chill. Fever in this stage; thirst often severe. Pains in precordia and the epigastrium are complained of. Dyspnea is common.

Following the sweating is a period of high fever with somnolence and dry skin. Following this, three to eight days after the beginning of the sickness, comes the exanthus, beginning always on the neck or chest. This consists of very minute vesicles—sometimes isolated, but usually close together. There is no definite areola to each vesicle, but the whole skin is reddened—often to the color of scarlatina. The spread of the eruption is very rapid. The trunk is usually covered—the extremities and face rarely. The fluid in the vesicles is clear at first, but soon becomes turbid and yellow, then gradually thickens with crust formation. The crusts fall after two to six days, and after this fine desquamation is not uncommon. Recrudescences with renewed sweating and fresh eruptions are common. The severe symptoms diminish during the stage of eruption, the fever subsiding, and the pains and sweating gradually disappearing, and the patient enters into a tedious convalescence.

Throughout the attack the appetite is lost, the tongue coated, and constipation is the rule. The pulse is soft and not increased in frequency in proportion to the fever. The heart and lungs show no lesions. The spleen is seldom enlarged. The urine shows little.

Choreic movements may occur. Death occurs during the first and second stages with signs of heart failure, or sometimes with delirium and convulsions and coma.

The blood shows hypoleucocytosis. The lymphocytes and eosinophiles are relatively increased. Microscopic examination of the contents of the vesicles shows nothing special. Blood cultures show a long slender organism, apparently a vibrio, which seems to be peculiar to this disease. It is uncertain whether the disease is directly communicated, or through an intermediary, such as the flea—many cases followed popular assemblies, as at church. No especial therapeutics or preventive measures are recommended.—*Zeitschr. fuer klin. Med.*, Vol. 59, p. 542.

## SURGERY.

Conducted by

MAX BALLIN, M. D.

**The Technic of Operations on the Central Nervous System** was the subject of the address on surgery presented by SIR VICTOR HORSLEY at the recent meeting of the British Medical Association in Toronto. The paper gives an epitome of the author's technic as it has developed during 20 years, his first cases having been presented in 1886.

The advance in technic has been relatively less than the advance in our knowledge of the seat and nature of diseases for which surgical intervention is necessary. A great deal of vital pathology and of the anatomical nature of brain disease has been learned in the operating room. When should medicinal treatment cease and operative begin? In general a three months' probationary treatment should be the limit.

Operative procedures may be palliative or curative. Palliative measures are usually undertaken for the relief of optic neuritis, headache or vomiting. Under curative treatment, the great point to be determined is whether or not we can get compensation of function when various parts of the cerebrum and cerebellum are destroyed.

(a) *Preparation.* Diet, etc., as for any operation. Disinfection of scalp with carbolic and sublimate for two days. In some cases preliminary administration of calcium chloride.

(b) *Anesthetic.* Always employ a general anesthetic. Pure chloroform has been used by HORSLEY for many years. Ether causes too much rise in blood pressure and too great an increase in blood venosity. Chloroform is, however, more dangerous, because of its effect on the respiratory center. A very interesting discussion of the dosage of chloroform is given.

(c) *Maintenance of Body Temperature.* Operating room should be at least 75° F. This also arrests capillary oozing.

(d) *Hemorrhage.* As few veins as possible are to be blocked. All arteries around the lesion are to be tied before extirpating it. Hot irrigation controls bleeding from arterioles and capillaries. All bleeding from the bone must be stopped by plugging with wax. Inhalation of oxygen is also a valuable means of stopping venous oozing.

(e) *Shock.* It is the opening of the skull which most frequently causes shock. Mallet and chisel are condemned, as no vertical pressure should be

made. The treatment of shock must be in accordance with the symptoms which threaten life, according as the respiration, the circulation or the body temperature are affected.

(f) *Septic.* Nowadays, when many surgeons can show an unbroken record of successful operations for hernia or appendicitis in the cold stage, it is not completely realized how very different should be our estimate of the proclivity of the central nervous system to invasion by septic micro-organisms and the extremely feeble degree of its resisting powers. The less drainage used the better.

(g) *Displacement of the Brain.* In elevating a hemisphere, the pressure must be gradual, allowing the soft nerve tissue to mould itself.

In the treatment of malignant disease of the brain, operation most frequently fails. Malignant tumors frequently attain a considerable size before diagnosis is possible. Recurrence was observed in no less than 20 out of 23 of HORSLEY's cases. Operation should be resorted to as early as possible; the tumor should be, if possible, freely exposed and examined and extirpated with surrounding tissue; if it cannot be removed without undue interference with important or essential structures, there remains some possibility of the tumor undergoing retrogression in a certain number of cases.—*Br. Med. Jour.*, Aug. 23, 1906.

**Temperature in Appendicitis.** In the report of a clinic on appendicitis, MORRIS says: "With a pulse rate of 86 to 90 and a temperature of 100° to 100.8°, we have a fairly well marked condition that is quite characteristic of appendicitis of the colon bacillus variety. The toxins of some of the bacteria will send the temperature very high and from that height, it will vary rapidly. The characteristic temperature of the colon infection is a degree on either side of 100, so that a patient with a violent attack of appendicitis may have a temperature of from 99° to 101°, but averaging 100°, yet the same patient with a simple staphylococcal or streptococcal abscess might have a temperature of 103° or 104°. It is very common for the toxins of the colon bacillus to greatly depress the vital powers. If there is a temperature of 100° and a pulse rate of 120 we must be prepared to operate immediately, for it means impending disaster.—*Int. Jour. Sur.*, September, 1896.



## GYNECOLOGY AND OBSTETRICS.

Conducted by

REUBEN PETERSON, M. D.

**End Results in One Hundred Cases of Conservative Operations on the Uterine Appendages.**—MANTON of Detroit reports 100 conservative operations on the uterine appendages. Of the 100 women, 30 were single, 64 married and 6 not noted. The following operations were done: On the ovaries, resection of both ovaries in 17 cases, right ovary in 26 cases, left ovary in 13 cases. Puncture of both ovaries in 22 cases, left ovary in 13 cases. Puncture of both ovaries in 22 cases, right ovary in 8 cases, left ovary in 14 cases. In 19 women the ovary of one side was found to be so largely involved as to require removal, the right in 6 instances, the left in 13. Resection was done in both tubes in 13 cases, right tube in 4 cases and left tube in 9 cases. It was found necessary to remove one tube in 10 of the patients, the right in 4 and the left in 6. The opposite ovary was left untouched or was resected.

In the 100 women the immediate results were entirely satisfactory, that is, all the patients recovered from operation and were relieved from the sufferings of which they formerly complained. The mortality was, therefore, *nil*, and the results temporarily perfect. The majority of these patients remained under observation for at least three months. Following this quarter year, 61 are known to be well at present, 31 have been lost sight of, 5 are doubtful, complaining of pelvic pain referable to the resected ovary, but in which no change could be detected on examination, and 3 required a second operation for the removal of the conserved organ, which in each instance had undergone further cystic degeneration. Of the 64 married women, 55, or 85 per cent., and of the 30 single women, 23, or 75 per cent, were well a year following operation. Of 64 patients of whom knowledge was had a year or more following operation, 41 were married. Of this number, 6, 14 per cent, subsequently became pregnant; 4 of these were delivered at term, 1 aborted at the third month and 1 is still pregnant.

The foregoing statistics and those of others show that the conservative surgery of the ovaries and tubes having passed the experimental stage, has established itself as a legitimate and successful operation in all the conditions to which it might be applied properly, and that it should be the operation of choice in all instances during the child-bearing age, in which the diseased state of the organs admits of its employment.—*Surg., Gyn. and Ob.*, July, 1906.

**Tubal Pregnancy and Carcinoma of the Cervix.**—POKROWSKI admitted to hospital a woman aged 26, who complained of bleeding and pain in the lower abdomen. A diagnosis of carcinoma cervicis later confirmed by microscopic examination, was made. Further, on the right side was felt a tumor the size of a fist, whose nature was uncertain. The patient had borne one child. Her last period was nearly two months ago, and six days afterwards she suffered from severe pain in the abdomen and bleeding. At the laparotomy the tumor was found to be a dilated right tube which had ruptured. It was removed along with its ovary, and the left ovary which was diseased and the carcinomatous uterus were removed at the same time. Convalescence was uninterrupted except for the formation of a small abscess in the lower angle of the incision. The patient left hospital on the 24th day.—*Zent. f. Gyn.*, 1906, No. 16.

**A New Axis-Traction Apparatus.**—JACOBSON describes his device as follows: The apparatus is composed of a clamp, which attaches to the edge of a table; an outer case, enclosing a worm and gear (which multiply the power); two rods, the lower one telescoping, joined to the clamp by universal joints; a crank-handle for operating the power-producing mechanism; a hand-wheel at the outer end of the telescoping rod for controlling the transit of the outer end of the apparatus through the orbit which it must describe, when in operation, around the universal joints as pivotal points, a steel tape, which may be replaced by another if kinked without taking things apart, and which winds up on a drum upon which it is held and around which it is guided by a metal case containing an aperture into which the tape passes and which does not itself revolve; a small axle upon which the gear revolves, and a dynamometer, one of the needles of which is pushed along as an index by the needle proper, remaining at the maximum point reached during the operation for later reference. The needle is true to the scale, whether traveling up or down. The apparatus is made chiefly of an aluminum composition, and weighs about five pounds. This instrument enables the accoucheur to employ measured, steady, and precise axis-traction, with a minimum of force and no expenditure of physical energy on his part. The writer has had excellent success with it.—*Medical Record*, September 15, 1906.

## PATHOLOGY AND BACTERIOLOGY

Conducted by

A. P. OHLMACHER, M. D.

**Animal Experimentation With the Diplococcus Intracellularis (Meningococcus).**—Following a very careful study of an enormous material in which the bacteriology of epidemic cerebrospinal meningitis was pursued both during life and at autopsy, v. LINGELSHEIM and LEUCHS turned their attention to the question of pathogenicity of the meningococcus, over 100 strains of which were available for their purpose. Preliminary tests of virulence were made by intraperitoneal inoculations of freshly isolated cultures into white mice, a culture being classed as virulent if three loopfuls suspended in 0.2 ccm. normal salt solution killed the 15-20 gram mouse within 24 hours. So tested, 3 out of 39 cultures obtained by lumbar puncture or at autopsy were virulent, while 8 virulent cultures were found out of 19 from the naso-pharynx. Four experiments on white rats were negative, but young guinea pigs (250-300 grams) were found even more susceptible since they succumbed to the same dose of the cultures found virulent in the mice. Experiments with rabbits by various methods of inoculation were unsatisfactory. Intraspinal injections of suspensions ( $\frac{1}{4}$  culture in 0.5 ccm. normal salt solution) of living meningococci produced only transient illness in 3 goats and 1 dog. With monkeys, however, more satisfactory results were secured and the experimenters can justly claim priority in demonstrating the possibility of reproducing in the monkey, by intraspinal injections of living meningococci, a fatal affection with certain clinical and pathological analogies to epidemic cerebrospinal meningitis as seen in man. Their work was performed in June and July, 1905, with 8 monkeys of four varieties. Suspensions of a single agar culture in physiological salt solution representing several of the strains found virulent for mice were introduced by lumbar puncture. Illness with certain symptoms of nervous involvement like rigidity and spasticity of muscle groups, palsy, tremor, ataxia and opisthotonos followed, and the animal generally died during the course of the first four days. Autopsy disclosed increased and turbid

meningeal fluid, congestion, and in some instances cloudiness of the soft meninges and some purulent exudate.—*Arbeiten u ber die u bertragbare Genickstarre in Preussen in Jahre 1905*, Erster Teil, Jena, 1906.

{*Reviewer's Note.* The results of v. LINGELSHEIM's and LEUCHS' investigations upon the experimental meningococcic meningitis of monkeys have been confirmed by Flexner of New York, whose recent experiments have just been published.—A. P. O.)

**Investigations Upon the Biology of the Meningococcus.**—During the Silesian epidemic of 1905 KOLLE and WASSERMAN embraced the opportunity thus afforded for studying anew the specific microorganism. They investigated the presence of meningococci in healthy persons, and in those suffering from non-meningitic diseases in Berlin and found no microorganisms with the characteristics of true meningococci in these individuals with the exception of one in which the main symptoms of meningitis later developed, and another exposed by contact with a child suffering from meningitis. Concerning the possibility of identifying the true meningococcus from allied diplococci, no difficulty was experienced when the peculiar behavior on culture media (predilection for a serum-albuminous content), staining properties including the invariable Gram-negative reaction, the selective pathogenicity for young guinea pigs by intraperitoneal injections, and the specific agglutination with the serum of rabbits, goats, or horses treated with dead and living meningococcus cultures were noted. Attempts were also made to demonstrate the presence of opsonins and bacteriotropic substances in the serum of horses immunized against the meningococcus. It was found that thoroughly washed leucocytes, whether of the blood or in the peritoneal exudate of guinea pigs after injection of sterile bouillon, had the power of ingesting numerous meningococci, but this property appeared to be intensified when the cocci were treated with normal serum, and still more marked when the immune horse's serum was employed. *Ibid.*, Erster Teil.

## PEDIATRICS.

Conducted by

R. S. ROWLAND, M. D.

**Infantile Derangements Due to Imperfect Breast Feeding** is the subject discussed in a recent volume of *International Clinics* by LOUIS FISCHER, M. D.

FISCHER says that it is not to be supposed, because an infant is receiving breast milk, that it is doing well. Besides serious gastric and intestinal disorders, he has seen the severest type of rickets, marasmus, chronic dyspepsia, atony and dilatation of the stomach and intestines, the result of abnormal breast feeding during the first year. The majority of so called second summer worriments, he believes are usually dyspeptic conditions due to careless or ignorant infantile management. FISCHER considers the two most frequent errors met with, especially among the inexperienced, are underfeeding and overfeeding.

Underfeeding occurs most often among anxious and nervous mothers who devote their whole time to the baby. The child is one that will cry and appears fretful all day and sleeps very little at night. Such a baby usually has its fingers in its mouth and sucks on them. It drinks everything, even water, greedily. As a result of gulping its food very fast, it may be subject to colic and frequently vomits. The stools are usually of a spinach-like consistency and greenish in color, often containing white particles of undigested curd. Sometimes they are watery and contain mucus and curds. Underfed infants do not gain and frequently lose weight. Their extremities are cold. The circulation in the hands and feet is poor, and the rectal temperature is between 97° and 98° F.

The treatment depends on the success of the efforts to produce suitable milk. There should be the strictest attention to hygiene, by changing the mode of living, which frequently means separating the mother from the child except at feeding times.

FISCHER makes the following statements in regard to diet for the mother. If the chemical examination shows deficient proteid, this can be remedied by ordering the mother to eat meat and eggs in addition to cereals. If the fat in the milk is deficient, the addition of cream, butter, rich milk, and the yolk of several raw eggs daily will increase the percentage of fat. If the proteids are too high as evidenced by the too high percentage of casein, active exercise will reduce them. Sedentary habits usually increase the proteids. If the total quantity of milk is insufficient, the mother should have a hot drink of milk, soup, broth, or tea with milk a few minutes before each nursing.

Hot oatmeal gruel will frequently stimulate the milk supply.

If by chemical examination, we find the breast milk continues abnormal in spite of these changes in living and diet prescribed for the mother, or if the infant does not respond and improve within several weeks, we must consider a radical change. In some cases where the breasts fill very slowly, the question arises as to whether or not maternal feeding should be continued. In many cases wherein the state of the mother and the scanty milk supply are not amenable to treatment, the following suggestions are given; utilize as much breast milk as possible and substitute a bottle instead of every second or third nursing. Thus, we give the mother a rest and still utilize her scanty milk supply for alternate feedings.

Overfeeding is also a very frequent cause of trouble. The majority of young mothers during the first few months of an infant's life, interpret every cry to mean only one thing, hunger. Crying being the only means for infant expression, we should learn to exclude all the many other causes before deciding that the baby is hungry. The symptoms of overfeeding are frequent vomiting of sour, indigestible, curdled milk with associated dyspeptic colic. The temperature as a rule is elevated. The stools are usually yellowish and contain less visible casein than the underfed child. As a rule there is mucus of a glairy character with a good deal of gaseous fermentation. When passed the evacuations are of an explosive nature. The stomach is usually distended and tympanitic. The infant is uncomfortable and hence cries considerably. The circulation as a rule is good.

In treatment the strictest attention to the intervals and the manner of feeding is imperative. One must insist upon slow nursing. This should be accomplished by withdrawing the breast several times during the meal, which should extend over twelve to fourteen minutes, no less, rather somewhat longer. In some instances it is wise to order sweetened rice water or barley water after the nursing act is complete. Some infants do not assimilate starch, be it ever so dilute. We may give sweetened water instead, about one ounce after the infant has nursed.

In some instances the life of the child may depend on the rapid withdrawal of the mother's breast and the substitution of a wet-nurse if breast milk is demanded; in most cases artificial feeding will prove most satisfactory. *Inter Clin.*, Vol. 2, 16 series, p. 127.



## LARYNGOLOGY.

Conducted by

J. E. GLEASON.

**Ozena Treated by Paraffine Injection.**—BLAZ reports ten cases of atrophic rhinitis with ozena which had been treated by paraffine injection, and kept under observation from one to two and a half years subsequently. Five showed no trace of crust formation nor any odor, and are therefore, in a relative sense, to be considered cured. Three showed still a slight formation of crusts, which, however, were easily removed by blowing, and to which was attached not the slightest odor. Two cases, girls of 15 and 12 years respectively, were absolutely uninfluenced by treatment. For failure in these cases it is suggested the slight amount of atrophy present, and the possibility of hereditary lues. The result of this series demonstrates that no other treatment has given as good success as paraffine injection. Forty-five per cent paraffine was used, and the best results obtained by injecting cold with Onodi's syringe. Injection was made under the mucous membrane of the septum in all cases when injection into the turbinates did not sufficiently narrow the nares, or when the septum was especially covered with ill-smelling crusts. The amount injected at one time varied from  $\frac{1}{2}$  to  $1\frac{1}{2}$  ccm. The author advises against spraying the nose, cleansing being best obtained with a Gottstein tamponade.

Treatment of ozena by paraffine is based upon the supposition that an essential factor is abnormal width of the nares. Freeze demonstrated that the ozena secretion is produced odorless, and that foetor arises from products of putrefaction, as well as from a plentiful supply of volatile fatty acids, resulting from direct decomposition of neutral fat. On account of this abnormal quality of ozena secretion, numerous microorganisms quickly transform the odorless secretion into a foul-smelling one. Following each injection of paraffine is a reactionary swelling, with an increased watery mucoid discharge, which is odorless. This lack of color is due to the consequent facility of removal of secretion by blowing. Wide nares offer a marked hindrance, as the expired air can not exert the force possible under normal conditions. The mere narrowing of the nose, therefore, favors removal of secretion, and since it is secreted odorless, a lessening of the odor. However even if the changes produced by atrophy are considered an essential symptom of

ozena, the chief cause must be laid to a hypersecretion of the mucous membrane—consequently in a disease of the latter itself. The principal effect of paraffine injection is therefore its influence restricting secretion by pressure on the mucous membrane. This influence is a permanent one, on account of the replacement of the paraffine by connective tissue. The obliteration of folds and recesses is also unfavorable for the growth of bacteria. So far as the author is aware, no untoward results have occurred in cases of ozena treated by paraffine injection.—*Archiv für Laryngologie*, xviii, 3.

**Therapeutic Suggestions.**—Among other things WILEMSKY advocates the use of paraffine gauze in all packing of the nose, especially anterior tamponade. Its advantages are that it does not absorb secretion and therefore remains sterile, as paraffine is not a culture medium. It produces no chemical or mechanical irritation to the mucous membrane, and therefore no resulting swelling and headache. It does not adhere to wounded surfaces, is easily removed without syringing, and therefore causes no renewed hemorrhages. Marked success is also obtained in its use in peritonsillar abscesses. The gauze is inserted into the opening, thus maintaining it patent, and allowing free drainage. Paraffine gauze is prepared by impregnating plain gauze with a mixture of two parts white vasoline with one part 58° paraffine.

The Author's method of paraffine injection in ozena is as follows: After injecting Schleich's solution into the septum, an incision is made one centimeter long down to the cartilage and the mucous membrane together with the perichondrium and periosteum elevated as far as possible, especially toward the floor of the nose since the narrowing of the inferior meatus is of special importance. Into the sac thus formed is introduced the nozzle of a syringe containing cold paraffine, and the anterior part of the nose then tamponed. This serves after removal of the syringe to close the opening and prevent the escape of the paraffine, and is to be left in position until the following day. The injection is to be carefully made, the syringe being slowly withdrawn as the patient experiences pain, which indicates a stretching of the mucous membrane.—*Archiv für Laryngologie*, xviii, 3.

## DERMATOLOGY AND SYPHILIS.

Conducted by

A. P. BIDDLE, M. D.

**The High Frequency Spark in the Treatment of Premature Alopecia.**—It will suffice to recognize two general forms of premature alopecia.

First.—Loss of hair due to systemic and neurotic disturbances. Under this heading is included all cases of alopecia in which there is no evidence of the desquamative diseases. It also includes all grades of alopecia areata.

Second.—Loss of hair primarily due to bacterial invasion. This includes all the cases presenting evidence of local disease, with the exception of tinea, favus, etc. In short the condition usually known and recognized as pityriasis, seborrhoea sicca, and seborrhoea oleosa.

At a glance it will be seen that the successful treatment of alopecia depends upon the proper employment of the three following rudimentary principles:

First.—The use of parasitocides to destroy bacterial invasion.

Second.—The use of internal remedies and hygienic measures to improve the general health.

Third.—The production of an improved local circulation.

As has already been mentioned, in a vast majority of the cases of alopecia, the loss of hair is produced by a bacterial invasion, causing a condition usually called either seborrhoea sicca, or seborrhoea oleosa, depending upon the local condition found in an individual case. In many of these cases the hair will cease to fall out, and begin to grow again as soon as the cause of the trouble is overcome. In such cases all that is required is the daily use of a parasiticide. In cases of long standing associated with impoverished circulation and vitality it is often necessary to employ some irritant in addition to the above treatment. Many patients having an alopecia produced by worry, overwork or other forms of nerve exhaustion will respond at once to regulation of the diet, attention to proper hygienic measures, internal remedies, and the local use of irritating or stimulating applications. There are, however, many cases of alopecia, regardless of the cause, which do not readily respond, and still many others unfortunately which do not respond

at all to these methods of treatment, no matter how skillfully prescribed.

The beneficial action of the high frequency spark is twofold, both stimulating and bacteriicidal, and may be summarized as follows: Its prime action in the treatment of alopecia rests in its power to produce a vasomotor dilatation, causing a physiologic hyperemia lasting for several hours. This hyperemia is mainly caused by the action of the actinic rays upon the vasomotor nerves. (These rays have been extensively and very successfully used in the form of the Finsen light in the treatment of alopecia areata.) Their action is materially enhanced by the severe electric bombardment and also by the heat effects.

During the period of hyperemia, which lasts from six to twelve hours, the hair follicles receive an increased blood supply and increased resistance to germ invasion is established. The fact that this hyperemia ceases after a few hours is very important, as when a hyperemia lasts for several days or weeks it becomes a chronic congestion, causing a hypertrophy of the connective tissue cells, produces a soil of low vitality, and liable to produce very untoward results. The bactericidal properties of the spark are both powerful and penetrating. The effect is produced by the actinic rays, by the heat effects, and also by the production of large quantities of ozone. This ozone is practically produced upon the scalp and undoubtedly penetrates to some extent, for its odor can be detected some hours after a treatment.

It is not necessary, but often advisable, to employ the various chemical combinations in conjunction with the high frequency treatment, and to continue the occasional use of a mild solution having both antiseptic and stimulating properties for some time after cessation of treatment.

Attention has already been called to the fact that the ordinary case of alopecia can usually be readily overcome by the judicious use of the various chemicals. The high frequency treatment should therefore be reserved for the obstinate cases.—MACKEE, *New York Medical Journal*, July 28, 1906.

## ORTHOPEDIC SURGERY

Conducted by

WILLIAM E. BLODGETT, M. D.

**A Study of Plaster-of-Paris Bandages.—**

MEISENBACH contributes an instructive article, from which the following quotations are made:

The technic of applying and manipulating the bandage are the same for both the pure plaster bandage and the cement bandage. Having prepared the proper bandages for use, they should be placed longitudinally into the solution which should be as near seventy degrees Fahrenheit as possible. They should not be placed upon their ends in the solution, because gravity and the air bubbles formed will cause the plaster to settle to the lower end of the bandage; this will result in an unequal distribution of plaster. The bandages should be allowed to remain in the solution until the air bubbles have ceased to rise. On removing the bandages from the solution, each end should be firmly grasped with a hand and squeezed so that no plaster can escape.

As the bandages are used, they should be handed to the surgeon each in a consecutive drier condition than the preceding. This assures a homogeneous set of the entire dressing.

In the process of application, the bandages should be unrolled twelve or more inches, and these strands of unrolled bandage conformed to the part with equal pressure. Each layer should be thoroughly rubbed with the hand as it is applied. This cannot be emphasized too much because by this procedure the life and strength of a dressing can be increased by at least a third.

Speed in manipulation is an important factor in all plaster work; the plaster dressing should be finished before the actual set has taken place. After the last bandage has been applied, the dressing should not receive any more plaster or water; if smoothness is desired the dressing may be rubbed en masse for a few seconds. The number of bandages to be applied depends on the nature of the part included and the age of the patient; however, it can roughly be stated that from eight to ten layers are sufficient, except over joints, especially over the hip and knee; over these the dressing should be reinforced, either with the plaster-of-Paris bandage turned upon itself, or by incorporating strips of rattan between the layers of plaster.

MEISENBACH finds pure dental plaster, i. e., without accelerators of any kind, and strips six yards long and four inches wide of starch-sized crinoline forty threads to the inch (as the Vigilant brand) the best materials. He comes to the following conclusions:

The essential things of value for a good plaster dressing for practical purposes are: 1. Strength. 2. Quick set. 3. Light weight. 4. Ventilation.

These are brought about and influenced to a great degree by the substances added to the plaster; the knowledge of the action of these will enable us to obtain any kind of dressing which we may desire, and especially to regulate the time of set.

Thus chloride of sodium in small amounts hastens the set; in large amounts retards it; in any amount it weakens the dressing by decreasing the crushing force and tensile strength. Moreover it weakens the dressing in direct proportion to the amount used. Dextrin in small amounts strengthens the dressing by increasing both the crushing force and tensile strength, but it also lengthens the time of set in direct proportion to its use. If the time of set is no object, it may be used to good advantage in certain cases as, for instance in making a plaster bed for multiple tubercular bone lesions. Starch in small amounts (that which is contained in starch-sized bandage) adds to the strength by increasing the tensile strength. It does not interfere with the set of the bandage.

Portland cement when used in the plaster-of-Paris bandage has the great advantage over chloride of sodium and dextrin in that it can be mixed with the plaster (five per cent) before the bandages are made and that it materially strengthens the bandage in all its essentials, i. e., increases the crushing force, tensile strength, and at the same time reduces the time of set and density. The density with it is less than the density of the pure plaster itself. The dressings made of the cement bandage are of a light sage color and are not easily affected by perspiration. They are much stronger and lighter than the pure plaster dressings.

Plaster dressings are usually fairly well ventilated by the vibration of the soft parts of the body, yet we often have a case in which this is below par, and in hot weather especially it is of great comfort to the patient to be able to have ventilation to the greatest amount possible. It has been found that if a dressing (a jacket or full spica for example) is made of the most porous material possible, that it can be worn at least twice as long and with more comfort. This fact is well noted in cases where it is desired to retain the same dressing over a long period as is the case in acute Pott's disease, where the future course of the disease often depends upon a long and uninterrupted immobilization of the spine.

In conclusion it may be said that the object of any plaster dressing is to apply as few bandages as possible and still retain the strength, which can be done only by using a bandage of the greatest efficiency.—*Am. Jour. Orthopedic Surg.*, July, '06, IV, 1, p. 1.



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## Original Articles

### A CONSIDERATION OF SOME OF THE DISEASES OF THE MAMMARY GLAND\*

THEODORE A. MCGRAW, M. D.

Detroit.

There is no class of diseases which demands more accurate diagnosis than those which affect the mammary gland, for there are none in which error may lead to more distress and injury. The reason of this is to be found in the prevalence of malignant disease in this organ, and in the difficulty of distinguishing it from other maladies.

The fact that chronic irritations of any sort are liable to pave the way for cancerous disease is also a factor in causing bewilderment and uncertainty in treatment. The physician who is consulted about tumefactions of the female breast is, therefore, in a dilemma.

If he fails to recognize malignant disease in its beginning, he deprives his patient of her best chance of life by not subjecting her to an early and thor-

oughly radical operation. If, however, he removes her breast when the trouble is of a more innocent character, he puts her in unnecessary danger and leaves her mutilated. Some thirty years ago I took the ground, with all the positiveness of youth, that every doubtful swelling of the mammary gland should be looked upon as a cancer and treated accordingly, for it seemed to me that the removal of the organ ought not to be a matter of hesitation if there were any possibility of a malignant development. I have noticed in medical journals of late many similar expressions of opinion on the part of operating surgeons. I have long since felt obliged to abandon that position, for I found many evils that resulted from that kind of practice.

A woman operated upon needlessly, when some innocent tumefaction is mistaken for cancer, not only suffers all the

\*Read before the Surgical Section of the Michigan State Medical Society, at the Jackson meeting, May 23-25, 1906.

rest of her life from the consciousness of a mutilated body, but she carries with her a haunting fear of a recurrence of the evil. Such a woman has parted forever with the joy of life for she has always before her eyes the spectre of cancer.

Besides its bad effect upon the individual I learned, too, that the practice had a wide influence for evil in another direction, for many patients, who accepted the diagnosis of cancer, even though it were qualified by an expressed doubt, would not accept the treatment and turned, instead, to some one of the many cancer quacks who infest the community, to be tortured for weeks by caustic plasters.

Whenever the destruction of the breast resulted in the cure of the disease, the case was trumpeted far and wide as a cure of cancer, and my diagnosis was published as evidence of the nature of the disease. I have come to believe that the main support of this class of charlatans comes from the mistakes of the regular profession, for there is hardly a month in which I do not meet with this kind of mistaken diagnosis made by members of the regular profession.

It seems to me, therefore, imperative on every member of the medical profession, either to acquaint himself thoroughly with those details which make correct diagnosis possible, or to send every patient with any kind of mammary glandular swellings to some expert, at the very earliest moment, for the determination of the nature of the trouble. I state this the more positively because I am convinced that for the most part a diagnosis as to the malig-

nancy of a given tumefaction may be made even before operation, and that in very doubtful cases it may be made during the operation by an exploratory incision and that thus a surgeon may limit his operative procedures to the necessities of each and every individual.

Let us consider, then, in brief, the many tumefactions of innocent character which may be mistaken for malignant tumors, and ask ourselves how they may be distinguished and treated without unnecessary injury to the patient.

First of all, both in frequency of occurrence and in inherent difficulties of diagnosis, are the many congestions and inflammations to which the breast is subject. They may occur in the virginal breast, or in the functioning breast, or in the climacteric breast. The virginal breast is liable to periods of congestion which are usually associated with disturbances of menstruation. When swelling and tenderness are coincident with that function they rarely cause alarm, but when they occur more irregularly and especially when they persist through the periods of menstrual rest, they excite great uneasiness in the patient and often impose upon the physician as cancerous growths. This kind of congestive hardness may occur in one or both breasts and may occupy one or more lobes, or may affect the whole gland. There should not be any great difficulty in diagnosing these conditions. Due to congestive disturbances, they fluctuate from day to day in tenderness, hardness and swelling. They are characterized by an evenness of tumefaction and an absence of well defined lumps. If the breast is lifted from the chest and held between the thumb

and fingers it feels like a tumor, but if pressed by the flat hand against the chest wall, it is found to be free from all nodules and lumps. These cases will get well under persistent strappings with adhesive plaster and belladonna plasters, but, like other congestions, are subject to recurrent attacks. I have seen many such cases, and have never found them to result in malignancy.

While this affection is found in virgins, it occurs also in married women. One lady, who came from New York City to consult me, had both breasts affected in this way. They had both increased greatly in size and apparent firmness. The trouble had lasted many months, and she had consulted many eminent surgeons and received a variety of opinions. She had been urged by more than one to have both glands removed. The whole trouble disappeared in a few weeks of systematic compression.

I do not know whether the chronic interstitial fibrous degenerations of the breast which are occasionally met with, result from the frequent recurrence of such congestions. The fibroma mammae diffusum, as it is called, presents itself as an even hardening of the whole breast which, when pressed against the chest wall, feels like a disc of wood. It is distinguished from scirrhus by the absence of adhesions to skin and chest wall and by absence of retraction of the nipple.

It causes, usually, little pain, and may remain for years without change and without glandular involvement. If painful, the only resource is to remove the entire gland. It is to be noted of these cases that the microscopic appearance may stimulate closely that of scirrhus,

for the reason that the proliferation of fibrous tissue around the acini incloses the epithelium, which may accumulate in nest-like cavities.

It must be remembered in connection with the diagnosis of chronic inflammations and cancer, that the one may prove to be the exciting cause of the other. A large number of cancers may be traced back to injuries and chronic irritations, and it may be absolutely impossible to determine the exact nature of a tumefaction if examined at the time when the inflammatory trouble is undergoing a metamorphosis to malignant growth. The logical inference, as regards treatment, to be derived from this fact is, not that every breast that is the seat of a chronic inflammatory process should be treated as cancer, but that no irritation of the gland should be neglected and that in case of intractability, the seat of the disease should be laid open by an exploratory operation, and then treated as the condition demands.

Acute inflammations, such as occur during lactation, occasionally form the starting points of sarcoma. When this is the case, the diagnosis may, for a time, be very difficult. An abscess forms and burrows its way through various channels in the breast. There is an excessive growth of granulation tissue and the organ becomes enlarged, red and painful and discharges pus from many apertures. The patient has fever, and rapidly loses her strength. A physician can not be censured who fails to recognize in this picture the growth of a deadly sarcoma. The correct diagnosis is most frequently made by some consultant, who comes to the case late, unprejudiced by the previous history.



If such abscesses, however, are treated properly, they would not become intractable. The child should be taken from the breast, free incisions should be made through all inflamed tissues, radiating from the nipple, drainage tubes put in and the organ subjected to systematic compression. If, notwithstanding energetic treatment, it continues to grow in size, it should be amputated.

Of all errors in diagnosis, however, the most common is that of mistaking the cysts of the climacteric period for scirrhus. These cysts arise from irritations of the acini or smaller ducts and contain a dark colored serum. In thin women they present themselves as round or oval elastic swellings. In fat women and when occurring in the depths of large breasts, they feel hard and dense and not unlike scirrhus. Puncture with an exploring needle causes the evacuation of the fluid and the complete disappearance of the tumor.

These cysts are frequently multiple and the fluid may be secreted again after evacuation, but they are usually cured by repeated punctures. I have treated very many of these cysts in this way, with almost uniform success. When the tumor, after the evacuation of its contents, disappears completely, so that the surgeon can feel no trace of it, the trouble is, almost always, benign. I have only once seen it followed by the growth of a carcinoma. It is, however, exceedingly important to distinguish this kind of cyst from those which are caused by the growth of a tumor. There are tumors which grow either from the epithelium lining the ducts or acini, or from the connective tissue around them, which are accompanied by a secretion of

serous fluid. Such cysts require prompt and thorough treatment by incision, examination and excision. Whether the whole breast, muscles and glands should be removed would depend upon the nature of the growth. They may be distinguished from the more innocent cysts by the effect of puncture, for in such cases the tumor does not entirely disappear after the evacuation of fluid.

The rule that I follow with regard to mammary cysts, then, is to make an exploratory puncture with a grooved needle. If the tumefaction completely disappears with the evacuation of the contained fluid, I keep the patient under observation and await events. If, however, there is left behind any perceptible swelling or lump, I urge the patient to submit at once to an exploratory operation, stipulating for a free hand as regards radical procedures, and doing what appears necessary after the preliminary incision. The objections made to an exploratory puncture on the ground that the puncture facilitates the dispersion of cells in case of malignancy appears to me of little weight. If the tumor is malignant, dispersion of cells will have taken place before the discovery of the lump. In that event, too, a radical operation should, in all cases, follow immediately upon the puncture. Those retention cysts which arise from obstruction of ducts and contain milk might possibly be mistaken for sarcomas. They are globular, elastic tumors which yield on puncture an inspissated milk resembling, in gross appearance, laudable pus. They may be cured by repeated evacuations.

Hard tumors in virginal breasts, before the age of twenty-five are, with

rare exceptions, innocent in character. They are usually fibromas or fibroadenomas. They may be distinguished from scirrhus by their circumscribed form and by the absence of all adhesions and retractions of tissue. They are frequently multiple, and often occur in both breasts, but their multiplicity is innocent and is due, not to a progressive infection, but, probably, to the survival of numerous embryonic vestiges.

During the past year a young woman of twenty-five years came to me from a city in the interior of the state with small tumors of this kind, one in each breast. She had been urged by her physicians, in consultation, to have both breasts removed. On examination, I found two hard, circumscribed nodules, without any evidence whatever of a diffused growth. The diagnosis was not doubtful, and I excised them through small openings, with very little injury to the mammary glands, and healing took place by first intention. Microscopic examination at the clinical laboratory showed formations of fibrous tissue without complication.

I cannot think that men who make blunders of this kind are justified in posing as surgeons.

Congenital malformations of the breast, and especially of the nipple, may obscure the diagnosis. There are some women whose nipples never properly develop, and appear retracted into the breast. When such breasts become the seat of local chronic inflammations or of cystic disease, the symptoms may simulate closely those of cancer. The history of the case may lead to correct conclusions, but if doubt remains the surgeon should make an exploratory incision.

The symptoms of a scirrhus in its early stages are, the presence of an illy defined, diffuse swelling, which, when first discovered by the patient, is often with difficulty felt by the surgeon. It must be remarked that a patient will often be better able to distinguish variations in the density of her own tissues than her physician, probably because the perceptions of her fingers are completed with those of the nerves of the part affected. I have myself, in a few instances, when called upon to examine a scirrhus at its very earliest appearance, been in doubt whether the lump which the patient felt was a real change in the structure of the breast or was imaginary, the result of an over-anxious disposition. This may occur, especially in large breasts in which the morbid changes are hidden by great layers of fat.

Later on, as the skin and the nipple begin to show signs of adhesion and retraction, the lump becomes more perceptible and the diagnosis becomes plain. It is of such vital importance that the disease should be made the object of early interference, that the surgeon should take every care to solve the question before the obvious and advanced stage. By pressing the breast with the flat hand against the wall of the thorax, irregularities in its density may be detected which would escape notice by other methods of manipulation.

In cases in which the patient insisted upon the presence of an induration which I could not feel myself, I should not hesitate to make an exploratory incision, first marking on the skin the suspected locality. If scirrhus were present it would, in this stage of uncer-

tainty, appear in the incision as a dense contracted scar-like spot, not larger than a bean. The operation should, in every case, be radical and thorough.

The soft cancers of the breast and the sarcomas grow more rapidly than scirrhus, do not cause the same retraction of the skin and nipple, and in the beginning are often more circumscribed in appearance. Their rapidity of growth and tendency to ulceration and hemorrhage ought not to leave doubt as to their nature. A tumor which grows

from the size of a bean to that of a walnut, in six months, is almost invariably malignant, and has to be diagnosed only from collections of fluids in the lacteal ducts.

In conclusion, I would again urge the general practitioner to familiarize himself with the diagnosis of the various tumefactions of the mammary gland, in order that he may not advise, on the one hand, unnecessary mutilations, nor, on the other, a disastrous postponement of necessary operations.

#### DISCUSSION.

**W. E. Coates**, Manistee, spoke of the difficulty of making a positive microscopic diagnosis in certain cases of breast tumor. An intracanalicular papilloma with cyst formation may be mistaken for a simple cyst; tuberculosis of the breast may be mistaken for scirrhus carcinoma; and the small cell granulation of chronic suppuration may be mistaken for sarcoma.

**B. F. A. Crane**, Saginaw, reported a case of mammary cyst in which aspiration and compression had led to complete recovery.

**W. T. Dodge**, Big Rapids, reported a case of recurrence in a case of simple amputation of the

breast by Dr. McGraw for a tumor, which, upon incision, had appeared to be benign. Three months after the primary operation there were three recurrent nodules. Thereupon, the radical operation was performed. Before the incision for the second operation had healed, axillary metastases appeared. These were reduced by radiotherapy, and the patient has remained free from any appearance of the disease for five years.

**Dr. McGraw:** A papilloma often makes a cyst, but after aspiration the residual tumor-mass can be palpated—the tumor does not entirely disappear. In all cases at all suspicious, cut into the tumor and decide further procedure by the findings after this exploratory incision.

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Blank cartridge wounds must be laid wide open, all dirt and wad carefully removed, and the area swabbed out with tincture of iodine or with pure carbolic acid followed by alcohol.

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Nitrate of silver may be attached in full strength to the end of a probe, as for application in the middle ear, by heating the tip of the instrument and pressing it into the stick of caustic; a little of the latter will melt and form a bead on the probe when it cools.

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In differentiating between gastric ulcer and gallstone pains, the association of a chill usually points to cholelithiasis.

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Impaction of feces in the sigmoid and rectum, with absorption symptoms, may simulate pelvic peritonitis.

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Before employing a rubber catheter test its resiliency. If it is brittle or cracked, discard it. Not infrequently a rotten catheter breaks off in the bladder while, of course, a rough catheter or sound may play havoc in the urethra.

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Pure nitric acid, applied on the narrow, blunt tip of a glass rod is successful in the complete destruction of verrucae, but only if it is forced down into their very roots.



## A CONSIDERATION OF SOME OF THE DISEASES OF THE KIDNEYS AND APPENDAGES\*

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W. T. DODGE, M. D.,  
Surgeon to Mercy Hospital, Big Rapids.

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I have been requested to discuss the kidneys and their appendages with special reference to diagnosis of surgical affections. The subject is broad enough to fill a good sized text book if treated in detail, and I have decided to restrict the field by confining myself to infective processes in the kidneys and appendages, their differential diagnosis and to the report of clinical cases occurring in my practice, presenting points of special interest.

Fortunately, we have facilities that enable us to make positive diagnosis in most cases of kidney disease, at the head of which, I place chemic, microscopic and bacteriologic examination of the urine. Laboratory workers are now so numerous and accessible that the practitioner has no excuse for failing to avail himself of this aid to diagnosis. The busy clinician does not have the time, even if possessed of the temperament and knowledge, to properly perform laboratory examinations, and the development of special laboratory workers should be encouraged. Urine of all patients should be subjected to careful chemic and microscopic examination,

even if symptoms do not arouse suspicion of kidney disease. By this means the significance of obscure symptoms is often made clear. When it is determined by this examination that infection of the urinary tract exists, it then becomes necessary to learn whether it be in the urethra, bladder or kidneys and if in the kidneys, whether in one or both.

The microscopist may have given a hint as to whether the pus comes from the bladder or kidneys. If it is in masses in an alkaline urine, it is probably from the bladder; if in isolated cells in an acid urine and particularly if casts studded with pus are found, it certainly comes from the kidneys.

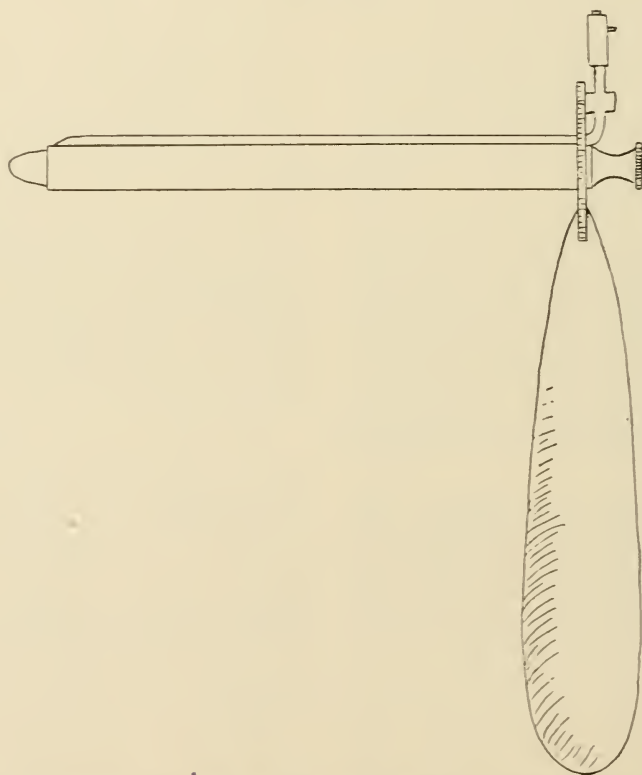
This class of work in my cases has been done by Dr. A. A. Spoor, of Big Rapids, and I wish to make due acknowledgment for the valuable assistance he has rendered me in a large number of cases.

When it is determined that pus is coming from the kidneys, it remains to be discovered whether both kidneys are infected or not and the nature of the infecting germ. The location of pain may be a help in diagnosis, but as some of my cases show, it is as apt to be mis-

\*Read before the Section on Surgery, at the Jackson meeting of the Michigan State Medical Society, May 23-25, 1906.

leading as otherwise. Palpation may discover an enlarged and tender kidney which is conclusive, but in many cases the kidney is not enlarged and is not palpable. This leaves as the only sure resource, one of the methods of securing urine separately from the kidneys and the only one of these procedures

other difficulty is often met with in diseased conditions of the prostatic urethra, in consequence of which, bleeding is set up by the passage of the cystoscope and the window thus obscured. In many cases, however, much can be learned from a cystoscopic examination alone; the condition of the bladder mucosa,



Kelly Cystoscope, (Modified) with Electric Light Attachment

that is not subject to error is that of catheterization of the ureters. In the male this is a difficult procedure and often impossible. In cases with bladder changes where the mucous membrane around the mouths of the ureters is swollen and the openings thus covered, it will be found impossible. An-

especially around the mouths of the ureters, will give a very good idea to the experienced man concerning the probable condition of the respective kidney.

In women, however, the procedure with a little practice is very easy except in cases of strictured ureter. The Kelly instrument, with patient in knee chest

position, is the most satisfactory. The only objection that I have found to Kelly's original instrument is the method of reflecting light through the instrument into the bladder. Long ago recognizing the advantage of the electrically lighted instruments, I attempted to find one built upon the Kelly plan that carried a miniature electric light into the bladder.

The Electro Surgical Instrument Co., of Rochester, N. Y., make and illustrate a cystoscope which they call the Kelly cystoscope, and I procured one of them but found it differed so much from the proper form of the Kelly instrument, being only 7 c. m. long, while Kelly's cystoscope is 11 c. m. in length and also having so much of its lumen obstructed by the light carrier as to render ureteral catheterization through it, impossible in the difficult cases. I suggested to the firm that they cut off a Koch urethroscope which is 15 c. m. in length, making it 11 c. m. long, attach a handle to it and send it to me. This they did, and I never had an instrument that has given me more satisfaction in use than this, which I now present you.

With it the bladder wall may be carefully examined and treated, and a few seconds is sufficient time in which to locate and catheterize ureters that are not strictured. I very rarely find it necessary to anesthetize a patient for this procedure now. You will observe that it is in all essential particulars a Kelly cystoscope with electric light attachment.

We now come to the question, as to the nature of the infecting agent. Bacteriologic examination of the pus in urine generally establishes the nature

of the infection at once, but sometimes more than one variety of pus producing germ is present, and only one is at first discovered, so repeated bacteriologic examinations should be made. The germs that have been present in my cases in order of frequency have been: colon bacilli, tubercle bacilli and diplococci. I have had several cases where the staphylococcus has been reported and one case where the gonococcus alone was found in the urine drawn directly from the pelvis of the kidney.

In a paper published in *The Journal of the Michigan State Medical Society*, February, 1905, I reported this case and commented upon the fact that the gonococcus had been demonstrated to frequently invade the kidney. This statement has been questioned and as it opens up an interesting problem, I repeat the report of the case here.

Mrs. H. married in January, 1903, consulted me eight months later for a cystitis that had commenced three months after marriage. Three months preceding marriage I had treated her husband for a mild attack of gonorrhea. He was supposed to have been cured, but microscopic examination of his urine was not made to demonstrate a cure. When the lady first came to me she had large quantities of pus in the urine, micturated every five minutes and suffered much pain. Rapid improvement of the bladder condition occurred under ordinary treatment, but a small quantity of pus persisted in the urine, in isolated cells and pus casts. On April 7th, 1904, I catheterized the ureter. The urine from right kidney was found to be normal, while that of the left contained much more pus than did the urine drawn directly from the bladder. Gonococci were demonstrated to be present in the urine drawn directly from the left ureter on several occasions. I irrigated the pelvis of the kidney with boracic acid solution and instilled a dram of 25 per cent argyrol solution. As the patient could only come occasionally for treatment, it was repeated irregularly and sometimes at long intervals. Such treatment was repeated April 30, May 11 and 17, June



7, 17 and 22 and July 29. After the third treatment, gonococci could not be found in the urine. The pus rapidly disappeared and October 2, when I last examined her, a mere trace was discovered. She has been entirely free from symptoms since the first irrigation of the kidney pelvis and instillation of argyrol solution. The treatment of this case covered a much longer period of time than would have been necessary had she been able to remain for continuous treatment. During the entire time of treatment she did all the housework at a large dairy farm, going home several miles immediately after receiving treatment, and doing her housework as usual.

There can be no question about the correctness of the diagnosis in this case; stains were made on three occasions in which the gonococcus was found positively. During this time, I was irrigating the kidney with boracic acid solution. After instilling argyrol, 25% solution, three times, no culture could be obtained. The well known germicidal action of argyrol upon the gonococcus confirms the diagnosis. Beides, the gonococcus is easily recognized—a diplococcus within the pus cell—and mistaking any other germ for this one is inexcusable. The patient has been under observation since and has had no further trouble. Finding the germ present in the kidney urine in the first case in which I had reason to suspect it, and reasoning from the well known habit of this germ to burrow deep in the mucous membrane, I concluded that gonococcus infection of the kidney was common. This opinion seems to be concurred in by Lydston who says "acute or even chronic gonorrheal inflammation is especially apt to extend suddenly (to the kidney pelvis) in this manner."

The following letter from Dr. Hunter, of Baltimore, indicates that gonorrheal infection of the kidney in the

absence of other infective processes is uncommon.

Many thanks for your kind letter of the 5th and your most interesting reprint. I wish to take exceptions to your statement at the beginning of page 2 that the gonococcus has been demonstrated to frequently invade the kidney. If one were to believe the writings of Ayres of New York, your statement would hold true. But I think no one else has been able to confirm Ayres' experience along this line. As you know, he claims to find a gonorrheal pyelitis in a large percentage of the cases that come to him of either acute or chronic gonorrhea. I am very glad, indeed, to have the report of your case as it is so conclusive and allow me to assure you, so rare. I have been on the lookout for such a condition for the past eight years and have never yet found a case with a pure gonococcus infection of the kidney. From case 17 in my report on tuberculosis of the kidney, I grew a pure culture of the gonococcus when the nephrotomy was done in 1899. But tubercle bacilli were found in this pus and it was clearly a case of gonorrheal infection superimposed on the tuberculosis. König, of Berlin, reports a similar case in the *Deutsche medicinische Wochenschrift* for February 15, 1900. Bransford Lewis, of St. Louis, reports a case in the *Journal of Cutaneous and Genito-Urinary Diseases* in September, 1900, which he claims to be a gonorrheal kidney. But I think if you go over his paper carefully, knowing what you do about tuberculous kidneys, you can not help but feel that a case of such long standing as his was due to an old tuberculosis upon which gonorrhea was implanted. Young reports a case of double pyonephrosis due to gonococcus in which the evidence rests upon the physical signs of pyonephrosis together with cystitis and the finding of great numbers of gonococci on cover slip and in culture, and the absence of any other microorganism. This was reported in Young's article on the Gonococcus in *Welch's Festschrift*, The J. H. Press, 1900. Yours is the only case I know of with positive evidence of a pure gonococcus infection."

In all kidney diseases attended by infection, the possibility of the presence of calculus should be considered. Often the irritation produced by a stone may be the exciting cause of the activity of pus-producing germs in the organ.

The differential diagnosis between calculus and tuberculosis is often difficult. The wax tipped bougie may give positive evidence that a stone is present, but a negative result is not conclusive of its absence. The same remark applies to the X-ray examination. The discovery of tubercle bacilli is conclusive evidence of the existence of tuberculosis, and by continued painstaking study of the urine the presence of stone may be determined. Hunner has recently published an exhaustive paper upon the diagnosis of renal calculus which is worth perusal.

Tuberculosis of the kidney affords material for a long paper in itself; I shall confine myself to briefly mentioning the main points in diagnosis and treatment and refer for further information to the very excellent papers recently published by Hunner and Sherrill.

Tuberculous infection of the kidney probably takes place in the great majority of cases through the blood or lymphatics. It is uncommon for it to travel upward along the ureters. In a vast majority of cases it is confined to one kidney and is curable by nephrectomy if discovered in time. Although infection of the bladder and ureter is common as would be expected from the constant passage of tubercle bacilli in the urine, yet the bladder complication frequently yields to medical treatment if the tuberculous kidney is removed. This statement should be modified as it is probable that tuberculous ulceration of bladder wall cannot be cured except by excision, but the inflamed patches of mucous membrane certainly yield readily to appropriate medicinal treatment. Cystoscopic examination in cases of tuber-

culous kidney reveals patches of inflamed bladder wall and usually thickening of the mucosa around the affected ureter. In advanced cases the ureter will often be found strictured, always thickened, and catheterization will be difficult. Hunner warns against catheterizing the healthy kidney in these cases on account of danger of carrying germs to that organ. He advises collecting urine in the cystoscope directly from mouths of ureter or in catheterizing diseased kidney, washing out bladder and collecting urine that comes into the bladder while catheter is *in situ* as representing the other kidney. This procedure may be satisfactory if the urine is free from germs when thus obtained, but their presence would not necessarily indicate disease of both kidneys.

The symptomatology of kidney tuberculosis is often very confusing. In all the cases I have seen the symptoms have been almost entirely those of cystitis and the bladder has been treated persistently without any relief being afforded the patient for months and years. Hunner mentions this symptom as being prominent in many of his cases. Given a case of extreme bladder irritability, with but little pus in acid urine and renal tuberculosis should be suspected. If it is present and the ureter is not obstructed, tubercle bacilli should be found in the urine in course of time. Hunner found them in 15 out of 22 cases. He advises that they be looked for on each of ten successive days in preference to making a large number of stains from a single specimen, and that the differential stain should always be used. An interesting case of mine reported in my paper on Ureteral Cathe-

terization and operated upon by Dr. Kelly did not show any tubercle germs in the bladder urine, but the ureter was found strictured and germs were found in the pus removed from the kidney.

Sherill believes that catheterization of both kidneys should be done unless the bladder shows extensive disease, believing that the danger of contaminating a healthy kidney may be reduced to a minimum, and that in no other way can the efficiency of the healthy kidney be positively determined. It being determined that one kidney is tuberculous and the other healthy, the bladder free from tuberculous ulceration, and that the patient is free from general tuberculosis, the indication is for nephrectomy and the prognosis is favorable for a speedy and permanent cure. If possible a portion or the whole of the ureter should be removed with the kidney, but in some of the bad cases with extensive adhesions that procedure may be found unwise if not impossible. Removal of the ureter involves a longer operation, more extensive shock and lessens the chance for recovery from the operation; on the other hand, it increases the chances for permanent cure.

In more advanced cases, even with involvement of both kidneys, much may be done to prolong life and relieve suffering by surgical procedures. In such cases nephrotomy should be done and efforts made to eliminate as much of the products of disease as possible. Of 35 cases reported by Hunner, comprising cases of the disease in all stages, 25 were known to be in good health at the time of his report, covering periods of time running from six months to fourteen years after operation. Tuberculous

ulcers in the bladder must be excised if a permanent cure is effected.

Colon Bacillus.—That infection of the kidneys by means of the colon bacillus is not uncommon, is demonstrated by the fact that two have come under my care during the past year. The cause of the infection in one case was obvious, but the other is not so clear. In both cases repeated cultures showed presence of the colon bacillus and of no other germs.

Case I—Mrs. M., aged 35, married, mother of two children, 13 and 9 years old, respectively; admitted to Mercy Hospital August 16, 1905. Menstrual periods had always been regular until December, 1904; since then they have been absent. Lost 27 pounds in weight. Two years ago had trachelorrhaphy performed. Physical examination showed presence of large tumor to the left of uterus. Operation August 21st disclosed the tumor to be a large pus tube extensively adherent to the intestines.

After catching the border of broad ligament to the outer side of pus tube and dividing between forceps, it was noticed that the line of incision divided a tube with mucous lining. The tube was fully one-half inch in diameter. It was temporarily fastened with ligatures and the tumor removed during which process openings were made in the small bowel and the rectum. After suturing the wounded intestines, the divided tube previously encountered was picked up and ascertained to be the much dilated left ureter. It was sutured end to end, catgut being used for the mucous lining and fine silk for the peritoneum. The ureter was found at point of division entirely surrounded by peritoneum. For two weeks the patient progressed toward convalescence without a single unfavorable symptom. On the sixteenth day she had a chill followed by high temperature and the urine was noticed to have a very offensive putrefactive odor. It contained large quantities of pus. Catheterization of the ureters was at once made and the offensive urine was found to come entirely from the left kidney, that from the right being clear and normal. Irrigation of the left kidney with boric acid solution and instillation of argyrol 25 per cent a few times, eliminated the bad odor and stopped the chills and fever. It also greatly reduced the amount of pus but never



stopped it altogether. Cultures made on various occasions showed the colon bacillus and no other germs present. Her kidney was thus irrigated several times per week until December. At times acetozone solution, 1-1000, was used, but the trouble could not be entirely cleared up. Finally she began to have elevation of temperature and to lose flesh again, so on January 4, 1906, I made an incision down to the kidney, proposing to do a nephrotomy, but after opening five small abscesses in various portions of the organ and encountering considerable hemorrhage, I did a nephrectomy and found three more small abscesses after removing the kidney. She made a slow convalescence and was discharged April 25, 1906, in good condition.

Case II.—Mrs. R. I first saw this patient at Reed City, December 24, 1905, with Dr. Nolte. In fall of 1904 Dr. J. G. Ochsner of Chicago had removed her appendix, punctured a cyst of the left ovary, shortened round ligaments, removed cervix and cauterized hemorrhoids. She had recovered nicely from the operations and had been very well until nine weeks before I saw her, when she had a sudden attack of pain in the right side radiating downward toward the bladder. Two weeks later had a similar attack on the left side, and three weeks later had third attack, mainly on right side.

All attacks had been attended with chills and fever. Present attack commenced three days before my visit and was attended with chills and temperature of 106°, followed by severe collapse, so that pulse was for a long time indistinguishable at the wrist. At the time of my visit temperature was 103° and pulse was very weak and thready. Urine showed presence of large amount of pus and casts. I advised administration of formin and as much water as possible. Patient had numerous relapses of the pain, but on the whole gradually improved and was moved to the hospital February 3, 1906.

Catheterization of the ureters showed granular and hyaline casts in right kidney urine, but no pus and no germs. That from the left kidney contained considerable pus and pus casts and granulation tissue. Upon culture pure colonies of the colon bacillus were obtained. There was also a small amount of albumen present. Irrigation of left kidney was practiced twice a week with boracic acid solution and instillation of 25 per cent argyrol solution. Formin administration by the mouth was continued. The patient continued entirely free from pain or any other unfavorable symptom after the first kidney irrigation, but the amount of pus did not diminish

much and the colon bacillus still persisted. So March 1st I substituted instillation of acetozone, 1-1000, for the argyrol and after three such treatments no further cultures could be obtained and the pus rapidly disappeared.

In all cases of urinary infection I am in the habit of prescribing hexamethylenetetramine in ten-grain doses, dissolved in a glass of water twice a day.

This drug has been extensively advertised under the copyrighted names urotropin and cystogen and under those names is extensively prescribed by the profession, the patient paying a high price for it. The drug is really inexpensive and can be obtained from several reliable manufacturers under the chemical name or under the name "Formin," which is not protected by a copyright. My experience has been entirely with the Merck preparation and I have found it a reliable urinary antiseptic, also acting mildly as a diuretic. In its passage through the body, it is decomposed and eliminated through the kidneys as formaldehyde.

All acute cases of gonorrhea can be aborted in a few days by the proper use of argyrol injections. Use at first 5 per cent solutions, requiring the urethra to be filled and the injection retained one-half hour, three times a day. If all creamy discharge has not disappeared in three days, increase the strength of the solution, using 10, 15 or 25 per cent. It is non-irritating in whatever strength used. Chronic cases present lesions that do not yield so readily, but in all cases the gonococcus will be destroyed if this drug in sufficiently strong solution is brought in prolonged contact with it. The cases of colon bacillus infection I have reported would indicate that acetozone is more reliable than

argyrol, where this germ is to be dealt with; 1-1000, solution is not irritating to the kidney or bladder.

### Summary.

1.—Have chemic and microscopic examination of the urine made in all cases of chronic disease.

2.—If pus is present, have bacteriologic investigation made.

3.—In all cases of kidney infection, obtain urine from kidneys separately, if possible, before resorting to operative procedures.

4.—If non-tuberculous infection is confined to pelvis of kidney, cure may confidently be expected from repeated catheterization and irrigation with appropriate antiseptic solutions.

5.—In tuberculosis infection of one kidney only, permanent cure may be expected to follow nephrectomy.

6.—In tuberculous disease involving both kidneys, nephrotomy should be resorted to, first upon the kidney most seriously diseased and this procedure may be expected to relieve suffering and prolong life.

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### Discussion.

**D. E. Robinson, Jackson:** The gonococcus is now known to be migratory, and may be found in any part of the body. Gonorrhea, therefore, should be known as a constitutionally dangerous disease, and the spread of it checked by education and every possible way.

**W. H. Haughey, Battle Creek,** spoke of a case of urinary tuberculosis in which the kidney and ureter were excised, and the other ureter implanted in a fresh, undiseased part of the bladder;

the patient died from rupture of the bladder wound. In a case in the speaker's practice, the kidney and ureter but none of the bladder were removed; the patient was very sick before operation, but recovered, and has remained well for several years.

**J. A. McMillan, Detroit:** Renal tuberculosis is usually seen late in connection with tuberculosis in some other part of the body, especially the bladder.

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The admixture of adrenalin to cocain solution counteracts much of the depressant effect of the anesthetic and enhances the local vaso-constriction. When the mixture is used on the surface of a mucous membrane, however, as in excising an ulcer in the mouth, one must be prepared for a marked reactionary bleeding.

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If a patient vomits coffee-ground material in which no lactic acid is present, one can almost always exclude carcinoma.

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In catarrhal icterus the pulse is usually slow; in jaundice from cholelithiasis this is usually not the case.

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In an attack of cholelithiasis the vomiting as a rule is not attended by relief of pain; the contrary is true in ulcer of the stomach.

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If an undoubted case of ulcer of the stomach is associated with chills, in most cases it means that the ulcer is adherent to the spleen.

## BORDER LINE CASES OF NEURASTHENIA\*

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CHARLES W. HITCHCOCK, M. D.  
Detroit

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A failure to properly appreciate the repetitions of history leads now and then to a complacent citation as new of facts which are of the oldest. Thus writers of late years have been wont to quote Beard as having first in 1869 described neurasthenia. This he doubtless did under this name, but Berkley cites authors of the 15th, 16th, 17th and 18th centuries as having mentioned conditions essentially the same, and some things in the writings of Hippocrates lead to the belief that even in this early day similar states were recognized. Strange, indeed, if the indulgent luxury of Greece and Rome could have come and gone without the high tension of the time having left its mark in the depleted neurons of Grecian reveller and Roman courtier. Nor were these times wholly lacking in those well competent to observe.

Small wonder if today the casual student is somewhat puzzled as to just where in his neurologic catalogue he is to place neurasthenia. Out of eleven authors consulted somewhat at random, four treat of the condition as almost purely a psychosis, while the remaining seven, on the other hand, treat of it

chiefly as a neurosis, although, of course, recognizing alterations of the emotions and the will, the not infrequent existence of morbid fears, obsessions and psychic hyperaesthesias. It may be debatable ground as to how long these pathological alterations may exist and how far they may give color to the clinical picture without there being excellent basis for considering the patient insane. Some opine that the descent to the realm of the psychoses is an easy one and the boundary line a vague and seldom-known division, while another writer says: "In some instances these morbid fears pass into insane delusions and obsessions, and are then beyond the boundaries of neurasthenia, *but the dividing line is decidedly definite*. Indeed, many psychoses begin as a neurasthenia and even general paresis may show a neurasthenic prodromal period."—(Church.)

Many and varied are the neurasthenic conditions encountered, but it is not for us here to enter into any discussion of neurasthenia in general, but merely to glance rather at the psychopathic side of its manifestations and briefly mention that class of cases the trend of which is to impress upon the observer the psychic rather than the somatic symptoms.

We shall all, doubtless, as we recall

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various cases of neurasthenia, recognize that here and there is a case in which mental symptoms were unduly to the front, cases in which the will perhaps was sadly impaired. Ordinary duties were magnified into difficult and impossible tasks and were greatly dreaded. Morbid fears were associated with certain acts, while the greatest indecision constantly intervened to prevent the performance of most common acts and duties. Morbid impulses to do needless and useless things are much present with these patients and all healthy inhibition seems to have vacated the mental throne. Morbid thoughts of possible crimes are idly indulged in and much emotional turbulence may be thus aroused.

Punton (*Journal American Medical Association*, December 2, 1905) regards the psycho-neuroses, which constitute psycho-somatasthenia as the forerunners of insanity and differing from it only in degree; Savage (*British Medical Journal*, March 8, 1906) shows that there are cases where patients are nervously and mentally disordered, but hardly to be treated as insane and pleads for greater liberty of treatment in those not dangerous to society or themselves. You will recall some cases which have given you only the usual worry and trials incident to the ordinary simple case of neurasthenia and you recall other cases in which you perhaps had no desire to commit the patient as insane, yet which drove you nearly distracted, which you would gladly have turned over to your enemy, cases, in which, aside from the usual physical picture of depleted energies the psycho-pathic manifestations dominated everything else and most im-

peratively called for treatment. You, perhaps, never took the case seriously enough to realize the dangerous ground on which that patient stood and the imperative need in which he was of most discriminating care and study.

It is especially the neuropathic patient who is in danger here, he who "has in him the elements of nervous degeneration, hereditary, congenital or acquired" (Dercum). He has the neuropathic basis on which the neurasthenic insanities are so easily built up that it is of vital importance that his danger be known and to this end it becomes a valuable and important habit, to take a full history of every neurasthenic case coming under treatment, inquiring particularly into details of family history. This is too often neglected in general practice.

Let me assure you that it is neither my desire nor intention to make this paper either an exhaustive or exhausting treatise upon the neurasthenic insanities or their differential diagnosis. On the contrary, I desire simply and plainly to plead for the more careful appreciation of these cases of neurasthenia which so greatly accentuate the psycho-pathic side and which if neglected, easily pass over the line into such degrees of insanity as may make asylum care and treatment imperative. These cases carefully studied and tactfully managed may often be saved the necessity of institutional care and under appropriate moral, hygienic and tonic treatment make excellent recoveries.

The moral is by no means the least important side of the treatment and healthful and helpful assurance and suggestion go far with these patients in

quieting morbid fears and helping to a better mental plane. Such cases are by no means rare and to few or none of you are they unknown as practical problems of practice.

Bear with me while I cite notes of these cases in point, none of which, I should say, showed any evidence at all suspicious of an organic psychosis:

Case I.—W. D., 46, married, commercial traveler, came to me in December, 1903. Both his family and personal history were essentially negative. He had been a very hard worker, had covered a large territory and had taken no vacation for *eighteen years*. He had for some time been growing irritable and suspicious, as well as very timid, and during the preceding two months had lost from ten to fifteen pounds in weight.

About a month before I saw him, he had been kept awake by a conversation in a room adjoining his in the hotel in which he was and, although careful questioning failed to elicit any reason to think this conversation as of especial importance or as concerning him in any way, he persisted in his belief that all remarks had some covert allusion to him, that he was accused of some crime, for which his arrest was planned. People whom he saw in the omnibus, on the station platform, and in the train, all cast sinister glances in his direction and made remarks to each other which he was sure, were of dire significance to him. He heard people talking about "a terrible charge" and with despairing look, he said to me: "Doctor, it's a notorious case." He is conscious of having done nothing wrong but is sure that he has been followed and bothered, even since he came home to Detroit. He says he is so "badly scared" that he will not resume his occupation under any circumstances. Everywhere he goes, people are talking about him and pointing him out. He says he is very nervous if contradicted.

Careful questioning and quiet, persistent moral assurance, frequently repeated, did very much to better his mental attitude and help him to correct what were fast coming to be with him fixed delusions. He was constipated and elimination was carefully looked after. He had been sleeping poorly and normal sleep was secured. Cold packs had their part in bringing about both a better somatic and psychic status.

He was inclined to try to continue some work but it was found that his power of endurance was

practically nil. All business was therefore interdicted and he was permitted only some petty tinkering about his home and a judicious amount of light physical exercise. He was kept under frequent observation, and assurance and suggestion gradually helped to greatly ameliorate his mental condition which had been such as to give his family the greatest anxiety concerning him.

He was detained from business as long as it was possible to hold him from it, but finally took up his usual duties against advice but still able to throw off his former obsession and devote himself cheerfully and efficiently to his business.

He was not seen for a year and a half when he admitted having slept poorly for some time and having again experienced some of his old ideas. He would only permit himself a very short rest and again resumed his work much improved.

A complete mental breakdown was not far ahead when he first came under treatment. Patience, tact, suggestion and other measures obviated the necessity of commitment and an asylum residence of some length.

Case II.—B. S.—Came under my observation about a year ago. He was 29, married, father of one child, a healthy baby of two years. He is a mechanical draughtsman by occupation and is distinctly of the neuropathic temperament. His mother had recently sustained an apoplexy at 58; his father is living, active and well but of intensely neurotic make-up; one brother is described as "very nervous" and a sister has been depressed and a patient for a time in a private institution.

He looked well nourished and says he has been healthy until within three or four months, when he began to have pains in the back of the head. He has slept well until a few nights ago but for the past two nights he has not slept at all. At times he is so restless that he cannot sit down even to take his meals and must eat standing. Often he cannot remain quiet and must go out and walk about. He has been in the hands of K. & K., alleged "specialists." His pulse varies from 76 to 92,—is soft and very regular, his temperature is 99.7° F.; the reflexes are exaggerated.

He has for some time been applying himself very closely to trying work which calls for inventive powers on his part in addition to his abilities as a draughtsman. This he is now unable to follow, for he cannot hold himself to it.

His condition was such that acute excitement seemed impending and this, I believe, was averted by prompt and suitable measures. A quiet life of two months absolutely apart from business did

something to improve his condition but he insisted on resuming his duties against advice and became a very trying patient, constantly sure at each successive interview that he had "kidney trouble," "liver disease" or disease of the stomach. He would ask if the habit of masturbation in boyhood was responsible for all his troubles now, and it was only with difficulty that he could be at all reassured on this point. He would ask constantly for an explanation of every possible feeling he could conjure, was sure that his genitalia which showed no visible change "were all withering away." A more prolonged absence from business did something more to improve his nervous condition and he is now able to follow a less exacting occupation.

Case III.—D. F. Came under my observation in October, 1905. He is 30, of Hebrew parentage, in the dry goods business in a small town, is single, and has lost about 22 pounds in six months. His habits have usually been good and of late he has drunk two or three glasses of whisky a day. His family history is practically of negative value, although his mother is said to be a very nervous woman.

He was healthy until 12 or 13 and since then has been rather easily depressed. Eight years ago, he was for a few months depressed over business matters, but made a good recovery on tonic and hygienic treatment. He has of late been unable to apply himself to work "because too nervous."

He has been, however, holding himself very closely to business, with little rest or recreation. Then began to worry and fear that business was in bad shape. All work or application brought excessive fatigue. He looks haggard and hollow-eyed and comes to the office all wrought up and anxious, almost on the verge, apparently, of acute excitement, firm in the belief that he was poisoned on the previous day by something put into a glass of water given him by his landlady to drink. There could have been no possible reason or motive for such an intentional poisoning, but he finds it difficult to believe that such is not the fact. He feared that he could not walk to the office, believed that he was likely to die on the way there, etc.

A careful, quiet, discussion of the events of the past few days, with a firm and kindly suggestion as to the falsity of his belief did very much to reassure him; good sleep, by the use of a hypnotic, was promptly secured, his faulty elimination corrected, appropriate tonics given and a most satisfactory recovery ensued, due quite as much to moral and hygienic measures as to the medicinal

means employed. A failure to appreciate the condition of such a case and treat it wisely and patiently means inevitable mental break-down and that this can be prevented by appropriate measures is ample apology for a simple, straightforward plea for the early appreciation and careful, patient study and treatment of such cases.

These cases, doubtless, find their counterparts in your experience. The problem must be early solved if the patient is to be spared a long mental siege and while, of course, much depends upon the personal equation with which you have to deal, much responsibility rests upon the management of the case. If the case go over the line into the domain of the insanities the picture is not so bright nor the hope of early recovery so good.

Through the kindness of Doctor Neff of the Eastern Michigan Asylum, I am able to present you a bare skeleton abstracted from notes of a neurasthenic case:

E. H., 40, a farmer, shows a neuropathic history. An uncle committed suicide, supposedly insane. A cousin, insane from injury to the spine, also suicided. The patient has always been of nervous temperament and, tho' probably always neuropathic, has been regarded as industrious and fairly successful. There has been present marked incapacity for work, pronounced emotional instability and attacks of uncontrollable impulses. After his agitation, he would be astonished and find it difficult of belief that he could have been guilty of such conduct. His gait was indicative of muscular asthenia, tendon reflexes were slightly exaggerated but easily exhausted. Association and attention were impaired and he was markedly introspective with pronounced hypochondriacal tendencies, and the fatigue syndrome in marked evidence. There is some improvement present after a two years' residence, but he is still far from well.

This case is cited as perhaps fairly typical of a class of cases on the other



side of the dividing line. It is of manifest importance, I think, that these cases be early given proper environment and treatment and so far as it is possible be

saved from such psychopathic development as shall constitute positive insanity.

### DISCUSSION

**Dr. A. M. Barrett**, Ann Arbor: Dr. Hitchcock's paper treats of one of the most unsatisfactory class of cases that demand our attention. Many of these patients are very sick people. The group is a complicated one, very difficult to separate from certain cases of maniacal or depressive insanity. These cases are much more common than is usually supposed and one frequently notes, in the onset, a history of shock.

**Dr. A. I. Noble**, Kalamazoo: The most careful attention should be paid to these border line cases. It is much a matter of opinion as to whether they are to be called neurasthenia or insanity. As a general rule, the most satisfactory treatment can be given outside an asylum.

**Dr. J. Flintermann**, Detroit: The neurasthenic is one of the most unfortunate of individuals. There are a great many such patients who need treatment, but there is no place to send them. It

is difficult to know what to do with them in private practice.

**Dr. Noble**: Such patients can be sent to an asylum, as nervous cases.

**Dr. Flintermann**: I have often suggested this, but it is difficult to get patients to go to an asylum.

**Dr. D. L. Clark**, Dearborn: The frequency with which parietic dementia develops from neurasthenia makes one think that neurasthenia is something more than a simple neurosis.

**Dr. Hitchcock**, in closing: I appreciate the danger of mistaking maniac-depressive insanity and paresis for neurasthenia, but do not hold the pessimistic view held by Dr. Clark in regarding all cases of neurasthenia as possible dementia. Very much can be done for these patients in the way of treatment that can not be done for a case of dementia.

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That a bone appears normal by fluoroscopic examination does not gainsay the presence of a fracture. A fracture of the radius, for example, may occur without displacement of the fragments. An x-ray plate will demonstrate the line of fracture, when the fluoroscope fails to.

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A bichlorid of mercury dressing should never be applied on an area of skin on which tincture of iodine has been recently painted. An iodid of mercury is formed, which is highly irritating.

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One of the most important elements in the treatment after intestinal operations is the administration of opium or morphin in large doses for the purpose of "splinting" the peritoneum.

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A sudden desire for sharp, sour and spicy articles of food in a middle-aged or elderly person is often the first symptoms of a beginning gastric carcinoma.

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In operations for suture of a fractured patella it is very important to sew the torn lateral ligaments of the joint. These aid largely in the support of the joint.

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A convenient way in which the anesthetist may carry, all sterilized and ready for instant use, his hypodermatic solutions, is the following: Shallow, wide-mouthed, half-ounce bottles are sterilized, labeled and filled. Over the mouth of each bottle is then stretched, and hermetically fastened, a cover of sterilized rubber (dam). Before the narcosis is begun the anesthetist disinfects his syringe and sets these bottles in a dish of sublimate solution. This sterilizes the surface of the rubber. When a solution is wanted the needle of the hypodermatic syringe is simply thrust through the rubber and as much as is needed is drawn into the barrel. The puncture hole closes without leakage. The covers of the bottles need to be changed only occasionally.

## THE PREVENTION OF VENEREAL DISEASE\*

F. McD. HARKIN, M. D.  
Marquette

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In a spirit of emulation of the method of Addison, the essayist, who frequently captioned his literary productions with some classic phrase, I am tempted to select as a fitting antescryptory motto for this brief paper, a paragraphic heading by the editor of *American Medicine*; "Naturalia nunquam turpida," i. e. Nature is never unclean. And why? Because it is my firm belief that much of the ill success that has so far attended our efforts in the suppression of venereal diseases, must be attributed to the hereditary teaching or sentiment that there is something unclean about the sexual functions, that it is not a proper subject for public discussion or scientific ventilation and that the correction of the evils incident thereto, should be relegated to some intuitive resisting genius of the individual, or the mild, timid, half-hearted adjurations of our esteemed friends, the clergymen.

"Know thy self" is a scriptural injunction hoary with age, yet shameful prudery, mental strabismus, moral myopia and palpable ignorance constitute fully 90% of the self knowledge of human kind today. There is no more noble ambition in life than that we work sedulously for the betterment of all conditions that give to ourselves, our contemporaries and our descendants, a more abundant life. A more abundant

life, to be really enjoyable and possess those attributes which produce a stable, enduring civilization, must recognize the limitations of natural and moral law and found itself upon a broad basis of personal chastity or of continence outside the married state, and, within it, of marital faithfulness. Overstep these bounds to a certain degree and ours will be the history and fate of those nations which, becoming financially and internationally powerful, lapsed into sexual immorality, gross materialism and moral decadence. Need I mention Greece, Assyria, Egypt, Rome? The modern Latin nations are honeycombed with sexual vices, even Germany is riddled with venereal depravity, and our own country seems nearing the fatal incline.

We cannot hope for a Utopia in sexual matters and such may never exist potentially on this planet, yet this should be no discouragement to us in our efforts to lessen and ameliorate the evil of venereal disease within our own national boundaries.

But a few days ago when speaking to an intelligent father with marriageable daughters upon the prevalence of the social evil he said to me: "Why, if I knew a young man to have been affected with venereal disease I would not let him come within a mile of my house;" and yet I know that youthful venereal victims have been welcomed to his household. There are thousands upon

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\*Read before the Upper Peninsula Medical Society.

thousands of parents in this broad land of ours who feel upon this subject as my quoted friend does, yet where and by whom is the battle being waged which can give some measure of assurance to the parents and something like protection to their children? There is no question but that the duty of leading in this fight devolves upon the physician, who is ever striving unremittingly to narrow the source of his income, by the banishment of disease. It is upon his shoulders, I say, that the responsibility rests of fighting false modesty with intelligent appreciation and dense ignorance with scientific enlightenment.

In the final onslaught upon the legions of gonococci and the purveyors of syphilitic virus, the auxiliaries of enlightened parent, pastor, pedagogue, social reformer, political economist, jurist and philanthropist must figure prominently, to ensure success, and yet it remains for the physician to enter the breach and strike the first blow, and the only one which can promise success, by proceeding under the shield and authority of state or better, federal, legislation and teaching and instructing the youth of our country—that youth who in a few years will constitute the auxiliaries mentioned—the dangers of promiscuous sexual intercourse and the appalling evils of venereal disease.

Bachelor physicians have the motive of altruism and philanthropy and married physicians have in addition to these, the immediate and more compelling motive of parental concern for the happiness of their offspring. Surely there is some incentive to the quickening of the medical conscience, when we consider that 80% of all deaths due to pelvic dis-

ease in women are due to gonorrhea, that 20% of blindness is due to gonorrheal infection of the new born, that the inflammations, degenerations and dystrophic sequelae of venereal diseases alone can keep our eye, ear, nose and throat specialists busy a big share of their time; that 50% of involuntary sterility in women is due to gonorrhea maritally acquired; that 50 to 60% of gynaecologic operations are superinduced by the agency of the gonococcus; that syphilis confers sterility, abortions, or degenerate offspring, and that its victims spread the disease, even extragenitally, to thousands of innocent persons.

Heretofore, most efforts in the way of prevention have been hap-hazard, indeterminate attempts at civic or police control of prostitution, and one need only mention such methods to pronounce them dismal failures, for, as a matter of fact, the greatest source of infection is outside the regular channels of public prostitution, amongst the clandestines and irregulars, and it brings us back to but one remedy, the remedy which has accomplished so much in the control and prevention of other contagious and infectious diseases, education, with its enlightenment, self-knowledge, frankness and open mindedness, wholesome dread and public condemnation. The only question is, how is this education to be disseminated or where or upon whom is the beginning to be made? To me there is but one reasonable answer: Upon our sons and daughters in the higher grades of the public and high schools.

And how is this to be achieved? By medical lecturers, appointed under fed-



eral or state authority, by the local boards of education, or what is better perhaps, by the presiding health officer, in every village, town, and city in these United States. My reason for leaving discretionary appointive power with the local board of education is that, exceptionally, the local health officer might not be the proper person to be entrusted with the imparting of the information prescribed. I say prescribed, for I well recognize the importance of selecting carefully the subject matter of such lectures, as well as the manner of its presentation, and this series of lectures should be planned, selected, and approved by no less an authority than the American Medical Association. Provision is already made by the state of Michigan for instruction regarding most contagious diseases, and the lectures on venereal diseases could form part of the already existing course of instruction, except that all lectures should be delivered by a physician.

That part of the course dealing with sexuality and venereal diseases would of course be delivered to the sexes separately, and in the presence of teachers and invited parents, that they also might be instructed and give sympathetic assistance to the plan. In these lectures appeals will be made regularly, say once or twice a year, to the honor, the moral perceptions and not least, the fears of the youth of our land, when the mind is still plastic and most capable of receiving lasting impressions. Can anyone estimate the amount of untold misery visited upon human beings, simply because not forewarned as to consequences, they were not forewarned against the dangers of sexual lawlessness?

From this series of lectures our daughters should learn the main facts in the anatomy and physiology of the reproductive organs and that the crowning happiness of their lives is an honorable marriage and a legitimate maternity. They should also learn that illegitimate sexual congress leads almost invariably to a disgraceful pregnancy or the acquirement of a loathsome disease, or, escaping these, a blasting of their name and reputation. Our daughters should also learn that in contracting marriage, all the Apollo like attractions in the world, voice, form, feature, accomplishments and what not, even with a big bank account in the background, will be but sorry compensation when she discovers herself bereft of the possibilities of maternity or gazes blankly at her degenerate offspring or cringes under the mutilating knife of the modern gynæcologist.

Our sons should know that continence is quite compatible with good health and the preservation of sexual competency; they should know that gonorrhea is something worse than a bad cold and more often endured than cured; that he, who brings to the marriage bed the germs of disease or the taint of syphilis, is a criminal and capable of inflicting inestimable suffering upon the trusting wife, whom he is supposed to cherish and protect.

Thus would be interested, primarily, the youth of our country, who will later constitute the country's parents, pastors, pedagogues, legislators, reformers and philanthropists. Secondly, the parents will be awakened to a consciousness of the duty which prudery and false modesty have long held in abeyance, and

the churches, not to be surpassed in the work of reform, will be stimulated to greater endeavor in preaching the value of continence and preservation of chastity. As said before, this will be but the beginning of reformative work. When we consider the permanence and stability of civilized government, the virtue and morality of a state's citizens are its highest assets and not its revenue in dollars and cents; the good, honest, pure blood of the human factors, is of much greater import than treasures of gold and silver. The state of Michigan today is second to none in her success in mitigating the evils of contagious and infectious diseases, and she should now set the example, and, if necessary, through the agency of this society which I have the privilege of addressing, of enacting legislation which shall meet the above mentioned requirements.

Education is at best a slow process and evolution is a tedious affair. Yet a few years of constant hammering cannot but be attended with fruitful results. Thus the leaven which primarily reaches our youths only, will in due time be spread amongst all classes indiscriminately and an awakened conscience will root out this evil of venereal disease. In future times, as a result of this pioneer activity, I can see our future legislators making a criminal offense for any member of society to marry if he is wittingly the victim of venereal disease. I can see these same legislators who are today so solicitous of the mighty dollar as to appoint many secret service officers for the suppression of the comparatively innocent offense of smuggling, I can see them, I say, in more enlightened times also appointing a secret service corps

of medical officers who will seek out and prosecute that guilty wretch, the criminal abortionist, who filches the virtue of our female youth by affording a ready asylum for the penalties of irregular sexual indulgence. I can see the future parents giving salutary advice to their children and taking more inventory of a prospective son-in-law's physical well-being, honor and integrity, than his valuation in filthy lucre. I can see a future clergy rending the veil of secrecy, which is its chief attraction, from the procreative function, and admonishing our youth in plain terms, that the Almighty has set his seal of disapproval on promiscuous sexual intercourse by the establishment of venereal disease. I can see our future reformers and political economists striving to substitute co-operation for competitive existence and thus allow prospective husbands to earn a sufficient income to allow them to marry between the ages of 18 and 30, the period of greatest procreative activity and during which, under existing conditions, the sexual appetite is perverted and utilized to the possessor's detriment or destruction.

Further, I can see our future altruists and philanthropists establishing gymnasiums, Bethel missions, public libraries and other sane and wholesome diversions for the activities of our adolescents; rational amusements that will attract them from the temple of Bacchus, which so many times is but the threshold to the temple of Venus. Finally I can see a future public conscience which will not enter into marriage without due regard for the sanctity of the relationship, which will frown upon easy divorce laws and never countenance the libid-

inous suggestiveness of much of our latter day theatricals, with their exploitation of bacchanalian revels and conjugal duplicity. It has been the inquiring spirit of intelligence as applied to religion which has given us less of web spinning philosophies and dogmatic theology and more of neighborly love and helpfulness. It has been the inquiring spirit of intelligence as applied to surrounding physical media, which has given us modern science with the annihilation of space and the numerous conveniences and comforts of present day sanitary living. It is this same spirit of intelligence that in the laboratory of the chemist, analyses all things and discovers for us active principals and syn-

thetic compounds of priceless value. It is this same spirit aided by the telescope and the science of mathematics which has given us a local habitation, and a name in the abyssmal depths of the illimitable ether. Again it is this same spirit which with the aid of the microscope has determined the causation and consequent prevention of man's greatest enemies, zymotic diseases, and laid the foundation for the triumphs of modern surgery.

Let us apply this same inquiring and directing spirit of intelligence with the aid of an enlightened public to this iniquity of venereal disease, and we shall in good time relegate it to past history and the realm of Chaos and Old Night.

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## CHLOROFORM QUANTITY VERSUS CARDIAC QUALITY\*

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ALDEN WILLIAMS, M. D.  
Grand Rapids

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I offer no apology for this subject, for as long as people die under anesthesia during operation, so long the subject will be of general interest.

Sources of danger have been nature's best gifts to man. Danger of defeat in mortal combat has made the historic man fight to be strong; danger of poverty makes the modern man work that he may acquire; danger of chloroform leads the physician to study that he may become competent.

The use of chloroform as a general anesthetic has been argued for and against by many of the most prominent men in the profession; long articles have appeared from time to time extolling or condemning its use; the majority of laymen is more skeptical today about its appearance in their homes than they are of ether. Text books, old and new, say that there is at least one death in 3,000 due to chloroform administration, while the rate of mortality from ether is given at a third smaller ratio.

Little remains to be said in a special way concerning the use of chloroform,

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\*Read before the Section on Gynecology and Obstetrics at the Jackson meeting of the Michigan State Medical Society, May 23-25, 1906, and approved for publication by the Publication Committee.



still in reviewing the recent articles on the subject one can hardly help gaining a valuable idea of the consensus of opinion. Chloroform in the east has been condemned by some men who have never used anything but ether. Reports in the west have been made on general anesthesia from a series of 25 to 50 cases only, with salient points perhaps, but often erroneous conclusions, and as it is known that the best method of balancing a subject and of turning the right side up is by discussion, to that end I review the subject, and give my few lines of anesthetic experience.

It is a well known fact that the great majority of recent graduates, young physicians and surgeons, and even those more advanced in years in the profession, would much rather wield the knife than the ether or chloroform cone. From this statement, it is evident why there are not *many* expert anesthetists; and the cases of chloroform poisoning, at least many of them, may be attributed to the skill-lessness of the anesthetists.

Previous to 1890, the majority of writers seemed to have feared chloroform mainly because of its effect upon the heart. In the articles of 1895 especially, less is said of cardiac syncope, and more of respiratory paralysis. Dudley Bruxton, as the exception, published in 1896 a series of 12 fatal cases in which continuance of respiration followed some moments after cessation of heart impulse.

In arguing with Bruxton's view, Alexander Wilson, of Manchester, stated in 1897 that chloroform caused death in at least two ways. First by primary failure of the heart, which was always fatal in spite of all methods of stimulation;

and second by gradual, primary, respiratory paralysis; in which case the fatal termination is progressive, warning being given of the impending result, with immediate treatment making chances of recovery good. Carter, of Weymouth, at this time advanced the idea that the latter cause was present in ninety percent of all cases, and held that the foundation of this cause was an *over-dose* of chloroform.

At the meeting of the Paris Academy of Medicine, May 20, 1902, Hunchard summed up the important discussion upon chloroform by advancing the belief that not 10 deaths in 100 were due to heart fault, and that chloroform administration was admissable in 80% of cases of senile hearts, and also in cases of valvular lesions of the heart.

Later under professional dissection Hunchard amended his remark on cardiac quality by excepting the admissability of chloroform in (1) hearts in the acute stage of an infective process; (2) hearts in final degeneration with attendant edema; and (3) hearts in stage of acute dilatation, still holding that in all other organic heart lesions chloroform could be administered with impunity.

And so in history, the pendulum of opinion has been swinging between chloroform and ether with asphyxia and syncope as causes of death, until in consternation the British Medical Association appointed a chloroform committee. The report of this committee in 1903 is of interest in view of the fact that in spite of the known dangers of chloroform, it is gaining in popularity. *The British Medical Journal* indorses the view of the above committee that in administration with the supply of definite

strength of vapor (i. e., not to exceed two per cent.) the probabilities of a perfectly safe outcome are assured in the near future.

As regards individual differences, there is no doubt but that different subjects present varying degrees of susceptibility to chloroform, as notoriously occurs in the case of the alcohol habitué, but the committee considers that the vague expression "idiosyncrasy" ought not to be accepted as explanation of a fatal accident, especially not if the method of administration involves considerable fluctuation in the quantity of chloroform absorbed per unit of time.

Thomas Strong, Surgeon U. S. Army, in *American Medicine* for September, 1904, states that in his opinion it has been shown conclusively, that death in the healthy animal is always due to respiratory failure, but is accompanied by heart depression severe enough to cause death. Hare and Thorton believe chloroform safe for the *healthy*, if administered by the *skillful*.

The difficulty of arriving at an accurate judgment of the cause of death in reported cases is very great. The reports are seldom accurate, being too often lay notes taken at public investigations of the case in the coroner's court, where the inquiry is mainly directed to ascertain that the patient was not murdered by intent or carelessness. To anyone noticing it, it is marvelous how men insist on the smallness of the amount of chloroform which has been used in a fatal case.

Who is going to say for the sake of statistical accuracy. "Gentlemen of the Court, yes, I noticed the respiration growing shallow, but the pulse seemed

strong, and I wished to keep the patient perfectly quiet. Yes, I noticed the blueness of the lips, and then listened again for the respiration, but could not hear any breath sounds. Yes, after that I felt the pulse at the temple and heard the heart faintly beating, by listening over the chest, and for honesty's sake, I testify, gentlemen, that I did give too much chloroform."

And so, fellow practitioners, if I advance my firm conviction that death from chloroform is almost always due to over narcotism, you may know that I did not come to this conclusion through printed admissions, found in medical lore, but through actual experience as an interne hospital anaesthetist in 520 cases, and in private practice administration in over 500 other cases; I am sorry to admit that my records are not sufficiently complete to permit of an accurate classification of the series, but having made quantity in minims per unit of time rather of a hobby, and having had five cases of suspended respiration, in spite of continual counting of drops, I wish to consider first this phase of the subject:—Quantity.

It is stated that by Krohne inhaler 20 minims are required in one minute, and six to eight such consecutive minutes are required for complete anesthesia, and any vapor strength above two per cent is classed as dangerous. Sascom, of London, in 1895, proved that air inspired from a surface of chloroform at ordinary temperature was loaded with vapor to the extent of 25 to 35%, that as the chloroform continued to evaporate the proportion rapidly decreased; but that even one-half drachm poured upon the lint gave off at the earliest in-

spiration an atmosphere containing nine per cent of vapor—a percentage known to be dangerous. He proved that an atmosphere of five per cent was one of overwhelming power, experimentally killing the strongest rat in 15 seconds.

M. Edwards, in an article printed in the *Lancet*, 1900, states that four minims of liquid chloroform will make four cubic inches of 100% vapor. This gives us an approximate basis for estimating percent administered with the ordinary mask. Allowing 15 seconds for the use of four minims or the four cubic inches of vapor, with four diluting human respirations of the average each of fifty cubic inches during that time, there would result a mixture of four cubic inches of 100% chloroform vapor in 200 cubic inches of respired air, making two per cent continuous strength in the lung alveoli which is generally agreed as the maximum per cent required.

In my own experience, beginning with my first recorded case of chloroform anesthesia, November 13, 1899, in which I kept track of the minims per minute, length of operation, and total quantity of chloroform used, up to May 13, 1906, the date of my last anesthetic, I can include authentically only 270 cases with an average of seven and one-fourth drachms of chloroform used during an average administration time of 35 minutes. This admits of approximately the average amount of  $12\frac{3}{7}$  minims dropped upon the mask per minute which is three minims less per minute than the required amount as quoted above in the article by Edwards. I wish to explain that the ordinary Esmarch chloroform bottle drops  $\frac{1}{3}$  of a minim at a drop, and therefore we must remem-

ber that three times as many drops are required as computed minims.

In following this quantity rule 10 to 15 minims per minute and also watching *always* for signs of danger, chiefly shallow respiration, I have found that there were the following cases in which that amount proved to be very near the danger line.

Case I.—A woman, 22 years old, April 22, 1900, post confinement curetment. Beginning with two minims the first minute, amount gradually increased per minute to 20 minims during the eighth minute, when anesthesia was complete. Then 16 minims each minute for 18 or 20 minutes, and because of deglutitory reflex I increased the amount to 30 minims a minute for three or four minutes. Respiration suddenly became shallow and stopped. Pupils were dilated, skin almost colorless, but pulse still was obtainable at the temple. Artificial respiration was required for fully three minutes before patient began again to breathe; the respiration was first shallow and gradually approached the normal, while capillary color returned. The cause was evidently too much chloroform.

Case II.—A man, 27 years old, March 23, 1900. Hip disease with spontaneous rupture of femoral artery, and great loss of blood. Patient kept under with only six minims per minute for 15 minutes, then amount was increased to eight minims. With cessation of respiration and result identical to the former case. Cause:—Too much chloroform. Patient, however, died three hours later from hemorrhage.

Case III.—A man, 31 years old, August 16, 1900. Acute appendicitis with pulse 160. Time required for complete relaxation—five minutes. Amount of chloroform for first 10 minutes—seven to eight minims. Increased because of abdominal tension to 12 minims. Respiration became shallow—mask removed, and pulse counted 180. Again eight minims dropped upon the mask and respiration ceased. Cause:—Too much chloroform. Began to breathe again after artificial assistance lasting two minutes. Patient died following day.

Case IV.—A child 7 years old, January 3, 1901. Circumcision. Due to struggling was put under rapidly. No count of drops for estimation of minims made. At beginning of operation child took two shallow, hesitating respirations, and stopped breathing. Held up by feet, and in one



full minute respiration quietly re-established itself.

Case V.—A woman 50 years old, January 10, 1905. Small cyst of mammary gland. Patient required large amount of chloroform and fully fifteen minutes of time before completely anesthetized. This large amount, 20 minims per minute, was kept up until suddenly with no warning, respiration stopped. It was fully four minutes by my watch, which I unsnapped, looked at, and laid on the table, before the diaphragm and intercostal muscles again contracted automatically; but in the meantime the pulse could be easily felt at the wrist.

From the cases cited it would seem that the following conclusions could be drawn. First, that cause of cessation of respiration in each case was due to temporary drowning with chloroform; second, that the minimum amount required is usually 10 minims per minute, but differs greatly in varying cases being much less in a case where physical weakness is present; third, that re-establishment of respiration by artificial assistance is the rule when the respiration's exact moment of cessation has been observed. In drawing these conclusions, I wish to be considered as speaking of the *probable* rather than of the *positive*, and too, while emphasizing quantity I do not wish to ignore the occasional authentic classical cases of cardiac syncope, due to peripheral reflex or vagus inhibition, in which the heart is supposed to stop beating before respiration ceases.

In regard to cardiac quality, I may be in error for it has become my habit of thought to consider cardiac murmur of slight import as a contra-indication to chloroform administration. To strengthen my opinion there are numerous patients with bad hearts who during anesthesia, departed themselves well, the last one of which I will cite.

Case X.—Miss J., 21 years old, March 10, 1905. History of inflammatory rheumatism three years ago, followed by marked murmur of mitral insufficiency. Three years ago suffered for three weeks with acute dilatation, during which time I attended her. Two years ago had another attack of dilatation lasting one week. Six months later chloroform was given for complete extraction of teeth of lower jaw. Due to trouble with root piece, and anesthesia was kept up for 35 minutes, with a total amount of one and one-half ounces of chloroform, or an average of 20 minims per minute. There were no cardiac danger symptoms, and no cardiac after effects.

It is my firm conviction that when chloroform is used properly quantitatively, the heart from a qualitative standpoint, unless in acute dilatation, or chronic disintegration, need not be a cause for fear.

In summing up a rather limited chloroform experience, the following few points come to me as worthy of mention, and if worthy of individual adoption, I believe will become additional factors toward future anesthetic safety:

1. In deciding whether chloroform may be given or not, one need not let the fear of heart lesion take away the patient's chance for operative benefit, and one may usually safely question any former decision concerning heart quality against anesthetic admissibility.

2. In all administrations of chloroform the progress should be gradual, and when the patient's minimum amount required per minute has been determined, be it 8 minims, or 18 minims, that such quantity and no more be supplied per minute by the open watch as long as required.

3. Divided attention be given respiration and the palpebral reflex with a view to keeping the former vigorous and 16 times per minute, and the latter just

discernible and induced 4 times per minute.

4. The text book advice to drop upon the mask till pupillary reflex alone remains is a dangerous teaching.

5. The mask should be kept dry and well fitted over the mouth and nose so that the amount dropped, which is a known quantity, may bear the closest possible relation to the amount inspired which is the potent quantity.

In conclusion, I wish to state that even had the time permitted it would not have been my object to try to add anything in a general way to the well covered subject of anesthesia such as preparation of patient, detailed procedure, emergency deportment, after treat-

ment, etc. Neither have I wished to champion one anesthetic against another. I have only chosen one point, quantity, in one anesthetic, chloroform, and tried to emphasize the use of the minim quantity for each minute, rather than for each operation. This is an appeal for evenness of administration. I may be criticised for having given small regard for ordinary heart lesions, and smaller regard for total ounces of chloroform consumed during the anesthetic period, but it might be said that excretion and expense are the *petty* factors influenced by the entire amount of anesthetic inspired while life itself is the *great* factor influenced by the amount inspired per minute.

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### ETHYL CHLORIDE ANESTHESIA\*

With Report of 104 Cases and Description of a New Inhaler:

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J. G. R. MANWARING, M. D.

Flint.

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The search for the ideal anesthetic is still on and probably will be for many years to come. For the present we are obliged to use those which have many shortcomings and it behooves us to study them well and choose them with care.

Ethyl chloride is one of the most recent to be heralded as the ideal agent for general narcosis and in some places it has been widely used, in fact so widely used that several deaths have followed and

mortality statistics have been compiled. These figures place it in a position on a level with nitrous oxide for safety according to some enthusiasts, while others decry it as being as dangerous as chloroform. The preponderance of evidence seems to show that it lies between ether and chloroform so far as safety is concerned. This is in full accord with its chemical composition.

It has been advertised by manufacturers as perfectly safe under all conditions and has been used consequently at

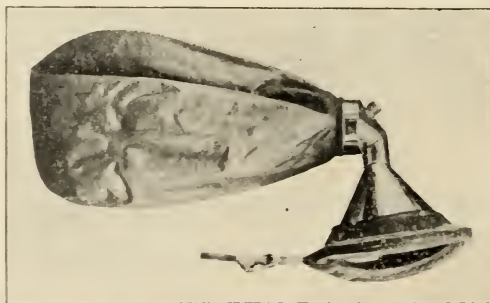
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\*Read before the Shiawassee County Medical Society, October 2, 1906.

times when a general anesthetic was contraindicated, with unfavorable results. A patient was recently operated upon in Guy's Hospital, London, for hydronephrosis under chloroform. Later another operation was deemed advisable, but as the patient had a double mitral lesion and at this time an acute bronchopneumonia, she was given ethyl chloride and death resulted. The diagnoses were proved by postmortem examination. One would naturally think that with one kidney gone, a double mitral valve lesion present, and the lungs involved in a pneu-

though they may be used if desired. The bag is an ordinary soft rubber ice bag which is easily replaced and readily turned inside out for cleaning. The whole is much less clumsy than most other models when in use, and is accessible throughout which is necessary for hygienic reasons. The inflatable facepiece adapts itself to any face, whether babe or an adult as is essential for successful results.

In administering ethyl chloride the precautions taken should be as with other anesthetics, excepting that the patient



monia that the patient was hardly a fit subject for any kind of an anesthetic, however mild.

Hawley in the *Journal of the American Medical Association*, for August, 1906, gives the latest summary of statistics on this subject and repetition is unnecessary.

For giving ethyl chloride satisfactorily, some form of closed inhaler is essential. The older Ware inhaler and others are now displaced by more closed methods, especially where a gas bag attachment is utilized. The one used personally is as shown in the cut. This has no obstruction to the lumen of the air shaft in the way of gauze or other appliances, al-

may sit up or lie flat as is best suited to the operation, and it is not necessary to give the bowels any attention. It is best for the stomach to be empty.

When all is ready the inhaler is placed over the face with the top turned so that the bag is out of the way and the patient is instructed to breathe quietly into the apparatus. Ethyl chloride is sprayed into the inlet and this is then closed with the thumb to exclude all air. It takes from three to ten c. cm. of the drug and from thirty seconds to two minutes for the desired narcotic effect. Two stages of anesthesia are used, the one of moderate depth from one dose and the deeper or longer



narcosis from frequently repeated doses. The former serves for most minor work and gives an ideal action, the latter is for more difficult cases and sometimes causes more after-depression with nausea. To judge of the depth of unconsciousness, have the patient hold up the hand; when he lets it fall in spite of your admonition to keep it up you can operate, and you will have about one minute for the work. For deeper effect it is given more freely by repeated doses until the eye reflex is gone, and this is continued as often as signs of recovery demand. By so doing, the anesthesia can be kept up a long time as in a case mentioned later, where it was maintained for fifty-five minutes.

The advantages of ethyl chloride over other general anesthetics are:

- (1) Its comparative safety.
- (2) Its reliability; with experience it does not fail to produce unconsciousness.
- (3) Simplicity of administration. The knack of using it is easily acquired, though timidity may cause a few failures at first.
- (4) There is little struggling or cyanosis. The excitement incident to any anesthesia is less, in proportion as the confidence of the patient is obtained, and it is but little when this is obtained.
- (5) It is pleasant to take, being free from suffocating sensations and bronchial irritation.
- (6) The recovery is rapid, and without sequelae usually. When deep anesthesia is produced it nauseates as often as chloroform, but this passes away much more rapidly. It seldom causes any disturbance in ordinary cases. The recovery is so rapid that one never has to await it

with anxiety as is often the case with other agents.

(7) As only three to ten c. cm. are necessary for a dose it is cheaper than nitrous oxide.

(8) It can be given with the patient sitting up if desired as is done by Ingalls in his frontal sinus operation and by many dentists.

(9) The apparatus is compact and is easily carried outside of the office, a difficulty which prevents nitrous oxide from being more used.

Those things which contraindicate other general anesthetics also contraindicate the use of ethyl chloride but not to the same degree, so that it can be used with less fear; especially is this true with babies and the aged. Murray recommends it very highly for babies and reports 150 cases, a large proportion of whom were from 5 to 7 weeks old.

When the operation promises to be a long one the ethyl chloride may be used to precede ether or chloroform, eliminating the disagreeable features that go with these during the induction of the anesthesia. This advantage is not so marked with chloroform, but it is great when ether is used.

The range of operations for which ethyl chloride can be used is very large, in fact embracing all operations which can be done in a short time; probably up to 15 minutes in length would be a good limit. If it is found desirable to prolong the work one can switch to another anesthetic at any time.

My personal experience, up to the date of writing, covers 104 cases. With the exception of four given with the old Ware inhaler they were all successful in

that unconsciousness was produced.

The duration of the anesthesia varied from a minute to 55 minutes, which time was that of a hemorrhoid case.

As stated before, in those cases where deep anesthesia was induced, nausea was quite as prevalent as would have been the case with chloroform. When it was given only to the primary stages, as for most operations, there was none or at most but little.

Of these cases, 15 were babies, several of them being circumcisions of from ten to twenty minutes duration, 35 were children, 50 were adults, and 4 were quite aged.

The only alarming results encountered were in one case, that of an old man with pronounced arterio-sclerosis and subject to asthmatic attacks. He showed a marked cyanosis with unconsciousness for about one-half hour, which cleared up under a hypodermic injection of 1/15 gr. of atropine sulphate. The pulse was unaltered throughout and respiratory efforts were made, but not much air was taken in. He had had 24 teeth extracted with two doses of the anesthetic. He as-

suredly was an unfit subject for any anesthetic.

The summary of the cases is as follows:

Removal of adenoids or tonsils or both.....	33
Preceding ether .....	13
Previous to chloroform.....	4
Opening abscesses .....	6
Extraction of teeth .....	13
Circumcision .....	7
Hemorrhoid operations .....	3
Drilling through tooth to nerve.....	3
Curetting corneal ulcers.....	2
It was given once each for the following:	
Removal of foreign body from cornea.	
Uterine curetting.	
Fistula in ano.	
Turbinectomy.	
Examination of a baby's eye.	
Reduction of Colle's fracture.	
Removing piece of wire from leg.	
Curetting necrosed bone from external auditory canal.	
Removal of sebaceous cyst.	
Examination of diseased hip.	
Opening furuncle of auditory canal.	
Setting a broken arm.	
Opening the maxillary antrum.	
Puncture of the ear drum.	
Uterine Dilatation and insertion of pessary.	
Curetting necrosed rib.	
Pelvic examination.	
Removal of ingrowing toe-nail.	
Dilatation of anus for fissure.	
Slitting up a prepuce for balanitis.	

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 Montgomery—*J. A. M. A.*, April 2, 1904.  
 McCardie—*London Lancet*, Oct. 7, 1905.

Pfister—*Wisconsin Med. Journal*, Jan., 1904.  
 Murray—*London Lancet*, Nov. 25, 1905.

Bronchiectasis is not seldom complicated by brain abscess.

den onset. Such an onset occurs in a fair proportion of cases.

In persons of middle age presenting gastric symptoms, the diagnosis of cancer should not be excluded because the symptoms have had a sud-

If pressure in the right hypogastrium gives rise to a referred pain in the shoulder region, the offending area is probably the gall-bladder and not the pylorus.

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### Editorial

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**Spelling reform**, as recommended by the Simplified Spelling Board, has been adopted by a few of the medical editors, but none of the larger or more influential journals has taken it up. With the exception of the *New York Medical Journal*, however, practically all American journals have for several years been using some of the abbreviated forms, if not consistently, at least for medical terms.

The Spelling Board would have us adopt some twenty rules, a number of which are very radical, while others are less revolutionary. In so far as these rules are a formulation of principles already fairly well established, they would seem to be worthy of adoption, but in case the rule is made simply to adapt the spelling to the pronunciation, as thru for through, the use can but cause great confusion.

Medical writers, on this side of the Atlantic, at least so far as medical words are concerned, are pretty well agreed on the sanity of the following of these twenty rules:

Rule 1. When offered a choice between a and ae, choose e. Examples: Anesthetic, ether, celiotomy.

Rule 8. Write the suffix ise or ize with

the z by preference. Examples: Anesthetize, etherize.

Rule 11. Omit one l from words now written with the double. Examples: Fulness, dulness.

Rule 12. In words with double m, followed by e, choose the shorter form. Examples: Program, gram.

Rule 13. In words spelled with oe or e, omit the o. Examples: Edema, esophagus, hemorrhage, diarrhea.

Rule 14. Always omit the u in words sometimes spelled with our. Examples: Labor, color.

Rule 17. Spell words in which the ending re is sometimes used, with er. Examples: Niter, meter.

Almost all of the above rules have been carried out in medical literature for a decade or more. Others should be added, some of which are as follows:

Substitute for the terminal al ic, as in pathologic, microscopic and bacteriologic. It is easy to do this with the longer words but at first it is something of a jar to read, and more so to hear "medic section," "a surgic case," or a "chemic analysis," although the ic in the root of the latter words is perhaps a justification of the suffix al. Etymologic spelling, however, has long ago disappeared, so that there is as good an argument for writing "surgic case" as for writing "prescription" instead of "praescription."

In the spelling of chemic terms (how does "chemic terms" sound?), drop the final e, as in atropin and bromid. Also in words which have come into our vocabulary with the incidence of serum therapy, as toxin and lysin.

Drop the hyphen in postmortem, culdesac, etc.

Drop the te from curet. Corsettes are



no longer used, why curettes? One might add, why cigarettes?

If we adopt all of these forms as we will sooner or later, consciously or unconsciously—does it mean that we should, just for consistency's sake, adopt the phonetic spelling? By no means. Progress in anything is made step by step, little by little, not by jumps and bounds. As Gould puts it—"Shall we then start on the 'fonetik talk'?" Heaven forbid! The sole reason that England and the English language are what they are, the sole reason why the nation, the race, and its tongue are the best we have, and are bound, meek or not, to inherit the earth, is that they and we are evolutionists and not revolutionists nor devolutionists."



**Must anatomic nomenclature be learned again** is a thought which has come to many of us during the past few years, and put the question aside as we may, it is one which must soon be answered; answered in the affirmative if we are to keep abreast of the times, in the negative, if we are willing to confine our reading to the older books on anatomy.

It has been said that the ordinary text books of anatomy, such as Gray or Quain, contain about 10,000 anatomic names, about half of which are synonyms, and that if all the names in anatomic literature (only those of macroscopic anatomy) were listed together, the number would reach some 30,000.

Many of these terms have of course come down to us from the middle ages, when each investigator, ignorant of the work of the others, christened new discoveries as his imagination dictated. The

list has been added to year by year until we are overburdened by synonyms. If the *valvula coli* is to be called by one the *valvula ileocecalis*, by another the *valvula Bauhini*, by a third the *valvula Tulpia*, and still by a fourth the *valvula Fallopiæ*, what is the poor student to do! He will likely call it the ileocecal valve and let it go at that.

The Basle Anatomical Nomenclature seeks to do away with this confusion. The origin and the exact nature of the list of names (the [BNA] as it is called), are set forth in the advance sheets of a new book by Barker soon to be published. From this book we learn that as far back as 1887, the German Anatomical Society appointed a commission to undertake a revision of the names. America followed in 1890 and Great Britain in 1893. The members of the original German commission were von Kolliker, Hertwig, His, Kollman, Merkel, Schwalbe, Toldt, Waldeyer, and v. Bardeleben. Thane of London was later asked to join in the work. Barker says: The task was a tremendous one. It was finally completed and adopted at Basle in 1895. The list comprises some 4,500 words and covers all of gross anatomy. There were necessarily some compromises, but in general the rules followed were six.

(1) Each part shall have only one name.

(2) Each name shall be in Latin and shall be philologically correct.

(3) Each name shall be as short and as simple as possible.

(4) The names shall be merely memory signs and need lay no claim to description or to speculative interpretation.

(5) Related names shall, as far as possible, be similar—e. g., Femur, Arteria

femoralis, Vena femoralis, Nervus femoralis.

(6) Adjectives, in general, shall be arranged as opposites—e. g., dexter and sinister, major and minor, anterior and posterior, superficialis and profundis.

To judge of the simplicity and uniformity which follows when these rules are applied, one must strive to forget his anatomy and consider whether, were he to start afresh, it would be easier to attempt some 10,000 haphazard terms or half that number chosen according to some logical plan.



**Will the [BNA] be adopted in America and Great Britain?** Barker believes that the new nomenclature will gradually come into use, as certainly will be the case if the medical schools in the large centers consistently teach it to their students. Every scientific man is now compelled to read articles on his subject in other languages than his own, and medical students in the best universities must answer this requirement. One needs but to pick up Henle's anatomy or Spalteholz's atlas, which are couched in the new terms, to appreciate how great a convenience a uniform nomenclature would be.

It has been objected to because "made in Germany." This is of course no valid objection, for if it is the best, it should be adopted, "whether made in Thibet or Timbuctoo."

The new forms have been objected to because they are entirely in Latin. It is not, however, intended that one shall always say "nervus femoralis" for "femoral nerve" or "os temporale" for "temporal bone," and yet, if learned in the

Latin form, it is just as easy and just as natural to do so. In time, many such words will lose their Latin flavor as have hundreds already in use, such as ganglion, cranium, pelvis, perineum, retina, etc.

One thing is certain and that is this:—If these new forms continue to be taught in the medical schools and if they are employed in the new books, they must naturally come into general use. We already have quite an extensive American literature in which the [BNA] is employed, among the works being Barker's "Anatomy of the Nervous System," the translation of Spalteholz's anatomy, the atlas of Sobotta and that of Toldt, and numerous monographs, especially on the nervous system. Furthermore, the new edition of the excellent and popular "Morris Anatomy" edited by Professor McMurrich of Ann Arbor, now on the presses, is couched in the new terms.



**Personal names used in anatomy have a certain fascination**, at least they have for the writer. For him, it was always more interesting to come across for the first time, the aqueduct of Sylvius than to try to swim the "iter a tertio ad quartum ventriculum," for when Sylvius had been looked up and his pedigree established, he became a lifelong friend.

Were all the personal names to be eliminated, we would lose much that is interesting for were Poupart's ligament from now on always known as the ligamentum inguinale, it would not be many years before that picturesque French surgeon would be lost to memory. Fancy burying forever our old friends, Bartholin, Cowper, Eustachius, Fallopius, Morgagni and a host of others.

His has given the arguments for and against the rejection of all personal names. Among the points which he mentions in favor of their rejection are: The injustice which has been done, many structures having been named not after their real discoverer, but after some later worker; personal names differ in different countries; such names are often used in great profusion in the literature of the specialties, names which are truly of no importance; no systematic plan has been followed.

In favor of retaining such names, His argues: Personal names are more easily remembered; a certain feeling of piety should restrain us from sacrificing to a principle, names which for centuries have been found good and useful; their use stimulates the student to look up the history of anatomy.

We cannot but feel glad that the Commission compromised the question by deciding to give each part an objective name, putting widely used personal names in brackets. Our generation at least need not be present at the funerals of our old friends.



#### THE RELIGIOUS PRESS EDITOR AND THE POOR SINNER WHO HAD QUESTIONS TO ASK.

An editor of a religious paper was on his way to the temple to pray. A poor sinner who took Christ's teachings as his "rule of conduct" was also going up to the temple to pray and to get inspiration to make his daily walk consistent. The sinner, jogging along, overtook the editor, and having something on his mind, became catechetical.

Question by the Sinner:—What is the chief object of a religious paper?

Answer by the Scribe:—To teach pure and undefiled religion, incidentally; but—the paramount object is to make the paper pay and comfortably support the editors.

Q. Is truth one of the strong points with the religious press?

A. Oh yes! Most assuredly! Except where our patent medicine clients come in, who generally have not a speaking acquaintance with Truth, and who "send us six special reading notices (not truthful) which we publish—in such a way that they—look like actual editorial matter" and which is accepted "as our own." They lie and we lie for them. Our ideas of truth have to be a little elastic, but—our paper has to be supported, you know.

Q. Honesty is one of the old-fashioned virtues, is it not? You still preach it, of course?

A. Truly, my dear brother, honesty is something great. Of course Christ said: "Woe to you scribes and Pharisees, hypocrites! for ye appear righteous, but are within full of hypocrisy," so we make a specialty of teaching the people honesty; still,—we don't use it for home consumption. You remember, perhaps, the remark of the temperance lecturer who was standing, half an hour after giving his lecture, at a saloon bar with a glass of brandy before him: "My lecture is for the people; this brandy is for myself."

These advertisers fairly yearn to get in touch with our trustful and confiding religious readers. They patronize our papers because they know our readers have faith in us and trust us.

Q. But, they swindle innocent people?

A. Oh yes, brother, they probably swindle the people out of hundreds of



dollars for every dollar they pay us for advertising, but don't forget the beautiful and inspiring ideas regarding honesty which fill most of our columns, and incidentally, that our highly moral and religious paper needs ample support.

Q. You preach hope to the fallen?

A. Oh yes, indeed! We just love to see the fallen raised from their low estate, —y-e-e-s, from the gutter, since you mention it, where the patent medicine tonics advertised in our columns have placed them. It is said they contain alcohol in large quantities, but we have made no strenuous effort to find out. We are paid well and that is what counts, for a religious paper must be supported.

"Drug habits with a hell attachment," did you say! Brother, that sounds like swearing. We frown upon that. In our children's columns we teach the little ones that swearing is an awful sin. Speaking of children reminds me of that sweet little thing in the way of a soothing syrup advertisement which we carry. "Opium in it?" It makes the most soothingest soother you ever saw.

You want to know more about drug habits? Ye-e-s, we carry one or two advertisements that are said to increase the drug habit rather than cure it, but the proprietors say it is an error, and we can't be too captious over a little thing like that. Besides we have a two-year contract with them which we cannot break without breaking our word, and that would be a sin, you know. Anyway, these advertisements are doing us a world of good, for they help to support our paper, you know.

Q. Are the religious people of the country in harmony with your views?

A. Oh no! they are indignant and re-

monstrate with us and say we are inconsistent, but then you know Mr. Vanderbilt once said: "The public be d—— Excuse me, I came near swearing that time. Profanity is a shameful thing and ought not to be tolerated. My language is as consistent as our religious paper."

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## Book Notices

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**Clinical Diagnosis.** A Text Book of Clinical Microscopy and Clinical Chemistry for Medical Students, Laboratory Workers, and Practitioners of Medicine. By Charles Phillips Emerson, A. B., M. D., Resident Physician Johns Hopkins Hospital, Associate in Medicine, Johns Hopkins University. 6½ x 9½ inches; 641 pages; 126 original illustrations; Philadelphia, J. B. Lippincott Co., 1906.

The most recent addition to the already long list of excellent treatises on clinical diagnosis is this admirable work by Emerson. There is this difference, however, between it and its predecessors; it treats of laboratory methods from the standpoint of the clinician, rather than from the viewpoint of the laboratory worker. The practitioner justly feels that laboratory work is a means to an end, rather than a series of routine procedures which may or may not be an aid to him in his work. Emerson, himself a clinician with wide laboratory training and experience, has tried to, and we think admirably succeeded, in keeping the clinical side of the subject foremost throughout the book. To quote from the preface: "The function of the clinical laboratory worker is to aid the ward worker. The findings of the former are seldom conclusive, and must be interpreted in the light of the ward findings; especially is this true now that functional diagnosis is the goal."

The subjects covered are sputum, urine, stomach contents, intestinal contents, blood and the various fluids. Just why the author has omitted analysis of human milk is not clear. Otherwise the work is complete.

The author's English is clear and concise. The working descriptions of the procedures are excellent, and the reader has the advantage of the author's advice as to which tests are the most reliable and satisfactory. Not a few points on treatment, especially the dietetic management, are scattered throughout the text.

The illustrations are original and are splendid reproductions from drawings made by well known

anatomical artists. We know of no better illustrations of the urinary sediments, for example, than those in the section on urine. The subtle characteristics of the various casts are remarkably well depicted. Indeed, throughout the book there is not a poorly selected or poor illustration to be found.

This book is a distinct addition to American medical literature and should win a wide popularity. The author, illustrators and publishers are to be congratulated.

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**A Text Book of Human Physiology.** By Robert Tigerstedt, Professor of Physiology in the University of Helsingfors, Finland. Translated from the third German edition and edited by John R. Murlin, Ph. D., Assistant Professor in the University and Bellevue Hospital Medical College, New York City.  $6\frac{1}{2} \times 9\frac{1}{2}$  in.; 751 pages; 305 illustrations; cloth. Price \$4.00. New York, D. Appleton & Co., 1906.

Since the first publication in 1897, Tigerstedt's "Lehrbuch der Physiologie des Menschen" has been the standard text-book of German students. The preparation of a third edition afforded an opportunity of translating the work into English, and this translation will be welcomed by all who appreciate the completeness and originality of treatment which have rendered the original so successful.

Professor Tigerstedt won his fame as a physiologist by work on two important subjects, the circulation of the blood and human metabolism. Dr. Graham Lusk, in the introduction, says that Tigerstedt is the only author of a text book of physiology who has any experimental knowledge of the latter branch of the subject. This section of the book, comprising 68 pages, is perhaps the most complete general account of metabolism given in any text book on physiology.

To fix the limits of a book on physiology is most difficult for, broadly speaking, physiology comprises large portions of the entire group of medical sciences. This book limits discussions on physiological chemistry, comparative physiology and abnormal physiology, giving only such facts as are essential to a clear understanding of human physiology.

The manner of approach to the subject is good. In the beginning a clear description of the methods of gaining physiological knowledge is given. The physiology of the cell is then discussed, which gives a broad biological basis for the further study of physiology.

The chapters on nutrition are authoritative, as are those on the circulation. In the former chapter, the author describes the methods by which the exact information of today regarding the value of food stuffs and the nutritive requirements of man, under different circumstances, is gained.

The large number of illustrations, 63 of which are in colors, leave nothing to be desired.

The translation is smooth and the equivalents of the German idioms are unusually well selected.

The very arduous work of seeing the book through the press was done by Dr. Dawson, Associate Professor of Physiology at Johns Hopkins, and was done well.

Altogether this translation of Tigerstedt's Text-Book of Physiology is, we believe, the most complete and the most broadly conceived one for its size in any language. Its appearance in English will no doubt meet with the welcome it deserves.

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**Eating to Live.** With some advice to the Gouty, the Rheumatic, and the Diabetic. By John Janvier Black, M. D. Quarto, 410 pages. Philadelphia, J. B. Lippincott Company, 1906.

This book on dietetics is written in a popular style and is such a discussion of the topic as will interest the layman. In the first sections are given a number of definitions and a number of tables showing the average composition of American food products taken from Atwater. Cooking and the economics of food are briefly considered. The process of digestion is next described. The section on food adulteration is well written and is a plea for a federal pure food law. Special diet for the baby and child, for the fat and for the lean are discussed and a few well directed shots aimed at vegetarianism. A popular review of Chittenden's "Physiological Economy in Nutrition" follows.

The second part of the book considers "Some Much-Used Foods." A particularly good section is that on the use of fruits. Some 70 pages are given up to the discussion of alcohol. Sections on the diet in gout, rheumatism and diabetes complete the book.

Altogether this is a readable little volume. Although there are evidences, here and there, of loose writings, it is on the whole carefully compiled. There are numerous pithy little bits of advice which are interesting and well given.

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Tuberculosis and cholelithiasis are only very rarely associated.

## County Society News

### HURON.

The annual meeting of the Huron County Medical Society was held in Bad Axe, October 8, 1906. On account of a severe rainstorm only 12 members were present.

The following papers were read and interestingly discussed.

"General Paresis," by Dr. F. A. Shaver; "Closer Relations Between Physicians and Dentists," by Dr. H. W. Pfaff; "Case of Obstetrics," by Drs. Mordin and Wenzel; "An Unrecognized Etiological Factor in the Diarrhoeas of Infants," by Dr. Jas. L. Walsh; "Caesarean Section," by Dr. W. J. Herrington; address by Dr. B. Friedlander.

The following officers were elected for ensuing year: President, Dr. B. Friedlander, re-elected; vice-president, Dr. W. J. Herrington, re-elected; secretary-treasurer, Dr. D. Conboy; delegate, Dr. F. A. Shaver; alternate delegate, Dr. MacKenzie; director, Dr. McDonnell.

D. CONBOY, Sec'y.

### LAPEER.

At the annual meeting of the Lapeer County Medical Society, held at Lapeer, October 10, 1906, the following officers were elected:

George W. Jones, Inlay City, president; W. J. Kay, Lapeer, vice-president; I. E. Parker, Dryden, treasurer; H. E. Randall, Lapeer, secretary; G. W. Jones, delegate, and Adam Price, Almont, alternate.

The following was the program:

1. Election of Officers.
2. "Anaesthetics"... Peter Stewart, M. D., Hadley
3. "Treatment of Diseases of Eye".....  
.....John V. Frazier, Lapeer
4. "Treatment of Diseases of Respiratory Tract"  
.....Orville J. Thomas, North Branch
5. "Treatment of Nervous Disorders".....  
.....William J. Kay, Lapeer
6. "Longevity"—Third Paper.....  
.....J. S. Caulkins, Thornville

Abstract of Dr. Frazier's paper—"Treatment of Diseases of the Eye": Seventy-five per cent of eye cases can be treated successfully by the family physician. In all cases be sure you are right then go ahead. If you are in doubt as to the diagnosis or treatment, consult the specialist.

After speaking of the various causes of conjunctivitis and its varieties, he spoke of the treatment. Simple conjunctivitis requires little or no treat-

ment. If due to eye strain, proper glasses must be had.

A simple and the best eye wash in his experience has been 10 grains each of boric acid, and salicylate of soda to the ounce. In cases in which there is considerable discharge, a mild wash of mercuric chloride is better, or one may apply a one per cent solution of nitrate of silver to the elevated lids.

The acute cases of conjunctivitis require no astringents; the chronic cases do. In chronic form, alum or silver nitrate or glycerite of tannin should be used. Always be careful not to use silver nitrate if there be breaks in the cornea or too strong so as to discolor the eye.

In gonorrheal infection, cleanliness is secured by washing the conjunctiva every hour with mild solution of mercuric chloride. This is forced between the lids with a glass or hard rubber syringe with sufficient force to remove all conjunctival discharge. Once daily, apply a solution of silver nitrate of a strength of 2 per cent and upwards, to the lids. If the swelling is too severe to follow out the former, drop solution into the eye and by a circular motion distribute the medication to the various parts of the eye. At the height of the attack, the patient should be in bed. In the new born, for a preventive wash, he uses a 2 per cent solution of silver nitrate, if there is a suspicion of a discharge in the mother.

Granular conjunctivitis, the bete noir of eye trouble, is best treated by the roller process. Some cases do better by incision of each separate granulation with squeezing out the contents. This treatment can be painless, if done with cocaine anesthesia. After surgical measures are used, copper sulphate in pencil form is used. Sometimes solution of mercuric chloride is used. The disease is liable to recurrence.

Phlyctenular conjunctivitis involving the conjunctiva and the cornea, is best treated by cleanliness and by attention to the general health; prevent constipation, regulate the diet and give internally syrup ferric iodide in good doses.

In all diseases of the conjunctiva, Frazier advises against the use of bandages and recommends dark glasses.

Dr. Kay's paper on "The Treatment of Nervous Diseases" will appear in full in an early issue of THE JOURNAL.

H. E. RANDALL, Sec'y.

### LENAWEE.

Lenawee County Society met at Blissfield, Oc-



tober 9th. The meeting was called to order at five o'clock, and a banquet served at eight o'clock at Coon's Tavern. Dr. W. T. Clemes, of Blissfield, acting as toastmaster.

Drs. J. V. White, J. A. MacMillan and Angus McLean, of Detroit, were guests.

Dr. White read a very interesting paper on "Dietetics in Tuberculosis." Dr. G. H. Lamley read a paper, "Report of a Case of Renal Calculi," exhibiting the specimen and radiograph. Dr. H. R. Conklin, of Tecumseh, read a paper on "Traumatic Lesions of the Eye with Special Reference to Their Effects on the Cornea" (to appear in an early issue of THE JOURNAL).

Drs. H. F. Vaughan, of Morenci, and Wm. Hyndman, of Cement City, were elected to membership.

The society voted \$20.00 rental for the Baptist church for a lecture by Dr. McCormack.

The society had a long and heated, though harmonious, discussion on an advisory fee bill reported by a special committee. It will not be adopted until it can be approved by every member. Mileage and the sliding scale (i. e., a minimum and a maximum fee) are the main points of contention.

E. T. MORDEN, Sec'y.

### MARQUETTE.

The opening meeting for fall and winter, of the Marquette County Medical Society, was held at the Ishpeming Hospital on Tuesday night, Sept. 18th, 1906.

Fifteen members were present.

The names of Dr. H. T. Carriel, of Marquette, and Dr. H. H. Ptolemy, of Trenary, were favorably reported upon by the committee on credentials and upon taking a formal ballot both were elected by unanimous vote to membership in the society.

No papers were read at the meeting, but a number of clinical cases were presented which were discussed by the members present.

H. T. HORNBOGEN, Sec'y.

### OAKLAND.

At the annual meeting of the Oakland County Medical Society, held Sept. 11, 1906, the following officers were elected for the ensuing year: President, J. J. Moore, Farmington; vice-president, G. W. MacKinnon, Oxford; secretary-treasurer, C. D. Morris, Pontiac.

C. D. MORRIS, Sec'y.

### OTTAWA.

The annual meeting of the Ottawa County Medical Society was held at Zeeland, October 9th, at which a large attendance was present. The following officers were elected: R. J. Walker, Saugatuck, president; H. J. Poppen, Forest Grove, first vice-president; A. Leenhouts, Holland, second vice-president; E. D. Kremers, secretary; W. G. Winters, Holland, treasurer; board of censors—T. G. Huizenga, Zeeland; J. A. Mabbs, Holland; J. W. Van Den Berg, New Holland; B. B. Godfrey, Holland; G. H. Thomas, Holland, Delegate to State Society. T. G. Huizenga, Zeeland; alternate, H. J. Poppen, Forest Grove.

Arrangements were made for the reception and the meetings of Dr. McCormack and a large attendance at the public meeting is assured. Dr. R. H. Spencer, of Grand Rapids, councilor for the Fifth District, was present and addressed the meeting.

E. D. KREMERS, Sec'y.

### SAGINAW.

The regular annual meeting of the Saginaw County Medical Society was held Tuesday evening, October 2nd, at the city hall, Saginaw, Mich.

The annual report of the secretary-treasurer showed the society to be in good financial condition, with a growth in membership of twelve.

The officers elected for the ensuing year are as follows: President, E. E. Curtis; vice-president, J. W. O'Reilly; secretary-treasurer, P. S. Windham; directors, J. W. McMeekin, W. L. Dickinson, F. S. Smith.

Retiring President B. B. Rowe rendered some very gratifying remarks relative to the growth, development and success of the County Organization, following which there was a discussion regarding the advantages to be gained by monthly meetings instead of quarterly as heretofore, and it was decided to hold a special meeting each month in which no regular meeting took place, continuing until May, 1907.

Dr. McMeekin exhibited a very interesting pathological specimen of a case of exstrophy of the liver. The child was born at full term and lived two days with the liver entirely outside the abdominal cavity not being covered even by integument. The liver was of about normal size and shape with gall bladder and ducts well developed.

Mention of the fact of the decision of the State Medical Society to hold its annual meeting

in Saginaw next year brought out considerable enthusiastic comment. Our local organization is most desirous that the entertainment of the delegates shall be of the highest order.

P. S. WINDHAM, Sec'y.

### SHIAWASSEE.

The Shiawassee County Medical Society met October 2, at Owosso, 12 members being present.

Communications were read from Dr. C. B. Burr, councilor of Fifth District, and from Dr. Manwaring, of Flint, secretary of Genesee Society, in regard to the district meeting, which will be held in Flint November 7.

Dr. Manwaring was present at the meeting, and extended in behalf of his county society a cordial invitation to the Shiawassee Society.

Dr. D. H. Lamb, of Owosso, was appointed to prepare and read a paper for the district meeting at Flint November 7.

Dr. J. G. R. Manwaring read an instructive paper on "Ethyl Chloride for General Anesthesia" with report of 104 cases. He exhibited an inhaler which he has used, it being an improved modification of the older inhalers. His paper with illustration of inhaler appears elsewhere in this issue. This paper was thoroughly discussed by all members present.

The meeting adjourned to meet December 4, 1906, the November meeting being postponed on account of district meeting.

JAMES A. ROWLEY, Sec'y.

### WAYNE.

Meeting of the Surgical Section, Sept. 24, 1906, Dr. Carl S. Oakman presented a paper entitled: "Chloroform and Ether."

The majority of surgeons at present regard ether as the safest agent for continuous anesthesia. This is proven by laboratory and very extensive clinical reports. Children are very susceptible to chloroform poisoning, and deaths, especially in nose and throat operations, are constantly occurring from the use of it, while deaths from ether under similar conditions are rare. The majority of deaths from chloroform occur in the early stage of the administration, so that shortness of the narcosis required is not to be regarded as favoring chloroform. Rothrock shows that the incidence of pneumonia after general anesthesia is about the same with all the anesthetics. Nausea after ether is commoner but less prostrating and persistent than after chloroform. The nausea after

ether is largely controlled by skilful administration, proper preparation, and post-anesthetic lavage of the stomach. Trustworthy postmortem and experimental records show the nephritic and other parenchymatous changes produced by chloroform are more frequently prolonged and serious. Nitrous oxide or ethyl chloride facilitates the starting of ether, although with time and pains simple ether can usually be given not unpleasantly to the patient. The safety of an anesthetic will depend upon the anesthetist and upon the individual case, and in each instance therefore the drug to be used should be selected according to the particular indications, but, with the average indications, ether, as proved by figures too extensive to be considerably affected by personal or local prejudice, is, considering both immediate and remote effects, several times safer than chloroform. A tyro will find it hard to kill a patient with ether, but death under chloroform may happen with a professional anesthetist.

Dr. T. J. Collins, D. D. S., Detroit, presented a paper entitled: "Somnoform."

Somnoform is a mixture of 60 parts ethyl chlorid, 35 methyl chlorid, and 5 ethyl bromid. Only slightly unpleasant to take. No cyanosis. Anesthesia from a single dose lasts 60 to 90 seconds, followed by a short period of analgesia. Usually no after-effects. Good record for safety. Apparatus simple and inexpensive.

Dr. Wadsworth Warren presented a paper entitled: "Nitrous Oxide."

Nitrous oxide differs from other anesthetics in being very easy to take, rapid in producing complete anesthesia (32 to 59 seconds), and rapid in elimination. The period of complete anesthesia from a single dose is 45 to 60 seconds in adults and somewhat less in children. It is universally conceded to be the safest general anesthetic. Andrews gives the following: ether, 1 death to 23,204 administrations; chloroform, 1 death to 2,723 administrations; mixed chloroform and ether, 1 death to 5,588 administrations; nitrous oxide, no death in 75,000 administrations. In the author's personal experience with gas for removal of tonsils or adenoids, deglutition reflexes are so quickly restored that there has been no difficulty from blood and tissue in the throat.

Dr. W. E. Blodgett said that pure ethyl chloride was a safe, easy-to-take, convenient, and not expensive general anesthetic. Diluted with only expired air, i. e., all fresh air excluded, it is variously placed by different observers as slightly less safe or slightly safer than ether. It is several



times safer than chloroform, and safer than somnoform. The anesthesia is induced rapidly without cyanosis or excitement; the complete anesthesia from a single dose lasts about a minute or slightly longer, i. e., longer than that from nitrous oxide. Nausea from a single dose (2 to 5 c. c.) is not to be expected. The initial dose may be repeated, but the field for which ethyl chloride is especially well suited is for operations of not more than two minutes and introduction into ether.

**Dr. S. Sraith, D. D. S.,** Detroit, said that he was familiar with 500,000 administrations of nitrous oxide without ill effect. He had given 200 to 300 nitrous oxide anesthetics for surgical operations without trouble from the cyanosis or in any other way. By repeated doses, he had prolonged the period of anesthesia to even 20 minutes.

**Dr. Grace Clark** said that somnoform was proving itself a really valuable addition to the means for inducing general anesthesia.

**Dr. C. D. Brooks** said that at Harper Hospital chloroform was losing ground in competition with ether. Chloroform seemed to be less dangerous in children than in adults. The anesthetist should be well trained and give his entire attention to the exhibition of the anesthetic.

**Dr. C. H. Judd:** All concede that nitrous oxide is the safest general anesthetic, but it cannot be said to be therefore the best, for nitrous oxide is available only for short operations. In the use of any general anesthetic, that degree of narcosis which abolishes sensation of pain and consciousness is all that is usually needed, even if the patient moves somewhat at the first incision.

**Dr. J. H. Carstens** said that in his opinion chloroform for obstetrical patients and for children was the anesthetic of choice. For adults, the question of ether or chloroform was still open. For strong adults and short operation, he used chloroform; for weak patients and long operations, ether.

**Dr. H. W. Longyear** said that five years ago he had changed over to ether introduced by nitrous oxide and followed by gastric lavage, after observation of methods in some of the eastern hospitals, and he had not regretted the change. The gas at the start saves time. The bad effects occasionally seen after ether are observed also after chloroform. Thus one of his patients had died, as shown by autopsy, from chloroform which had been administered the day previous.

**Dr. W. A. Spitzley** said that many operations not involving extensive manipulation of the in-

testines, even hernia operations, could be done under local anesthesia, by distension.

**Dr. J. E. Clark** said that in his mind the controversy between ether and chloroform was as much undecided as thirty years ago.

**Dr. L. J. Hirschman** said that there was always more trouble with the anesthetics whether by ether or chloroform at the time of entrance to the hospital of the new externes. The safety of any anesthetic depended greatly upon the man behind the mask. He had demonstrated by a series of cases and control cases, which he had published, that 15 to 20 grains of chloretone given before the anesthetic reduced the amount of the anesthetic required, facilitated administration of it, and lessened the liability of after-nausea.

**Dr. James Samson:** Chloroform in labor does not kill because it is desired by the patient. The administration of chloroform is rendered much safer by confidence on the patient's part. The regime of administration, therefore, and the preparation for the operation during the initiation of the narcosis should not be such as to alarm the patient. The patient's fear and the anesthetist's bungling are the causes of the trouble in chloroform administration. Towels wrung out in hot water applied to the chest and violent artificial respiration are effective restoratives even after apparent death from chloroform.

**Dr. T. A. McGraw** said that as army surgeon in the civil war he had seen no trouble from chloroform. The only chloroform death that he had had was not due to fear. He believed that ether was as deadly as chloroform, only in another way.

**Dr. Leartus Connor** said that the freedom from danger of chloroform in confinement and on the battle field, and the greater danger before the operation is begun suggested that suffering might be the antidote for chloroform poisoning.

**Dr. G. E. McKean** reported an alarming complication of chloroform anesthesia during version in child-birth.

**Dr. G. E. Fay** commended cotton jackets during ether to conserve the body heat, and subcutaneous injection of 1/150 gr. atropine and ¼ gr. morphine.

**Dr. John Flintermann** showed that postoperative pneumonia is not always due to the ether used.

**Dr. H. W. Longyear** suggested that the mucus was a protestation against the irritation of the



ether, and atrophine that checked the excretion of the mucus was therefore to be condemned.

**Dr. Oakman**, in closing, said statistics from the civil war showed that on the average there was one death to 200 administrations of chloroform. Instead of the comparative safety of ether and chloroform under average conditions being still an open question, impartial review of the very extensive statistics on the subject, relative to both immediate and remote results, and the practice of an increasing majority of the surgeons of large experience lead to but one conclusion.

The section unanimously passed votes of thanks to the retiring officers and to Dr. Collins.

W. E. BLODGETT,  
Secy. Surgical Section.

MEETING OF THE MEDICAL SECTION, OCT. 8, 1906.

**Symposium on Scarlet Fever** was held.

Speaking on the **Present Status of the Bacteriology**, **Dr. V. C. Vaughan, Jr.**, said that our knowledge is at present very unsatisfactory. The role played by the protozoa and by the streptococcus were discussed, and no definite conclusions made.

**Dr. T. W. Ames** reviewed the Symptomatology and Diagnosis.

**Dr. I. L. Polozker**, in his paper on the treatment, emphasized the necessity of looking after the diet, keeping the naso-pharynx clean and reviewed points on isolation. He had had excellent results with anti-streptococcus serum in some cases.

**Dr. T. B. Cooley** opened the discussion: I wish to emphasize the three cardinal symptoms, the appearance of the tongue, the sore throat, and scarlet rash. Ordinarily, in doubtful cases, where there is an intense eruption with low fever, we do not have the disease in question. As to the first appearance of the eruption, the flexor surfaces of the axilla and elbow are very common. I do not believe the pulse rate to be of great moment in diagnosis, except in differentiating from diphtheria. The discharges from the nose and ears carry infectious material, and should be properly taken care of.

**Dr. Charles Douglas**: I am still undecided as to the merits of the serum treatment. I believe thoroughly in the cleansing of the nose and throat, whether by douche or spray. As to combatting high temperature, I use continued cool water in bags (90-95°), rather than a temporary cold bath (70°). Tepid baths are given to allay

nervous and restless patients. Keep the food down to the digestible point.

**Dr. Sigel**: Thoroughly eliminate the toxins by the skin and kidneys by rubbing the patient with tepid water. I do not believe in the use of water in bags, as it is dangerous to use cold water without friction.

**Dr. H. M. Rich**: In looking over the literature, I have found the reports of serum treatment favorable when series of cases are considered. It is not so magical in its effects as antidiphtheritic serum, but is very beneficial in complicated cases.

**Dr. C. G. Jennings**: The diagnosis of scarlet fever in some cases is difficult, and may be impossible. In differentiating from German measles where there is an erythema, the principal point is the enlargement of the post-cervical glands in this disease, while the scarlet fever patient is sicker, has the rapid pulse (140-160 per minute), as well as the four prominent symptoms of this condition, nausea, strawberry tongue (during the first 24 hours we have a white coated tongue with swollen papillae projecting through it) and sore throat. In tonsillitis, quite frequently at the onset there is erythema, and even in acute indigestion at times with rapid pulse, a little sore throat, and coated tongue we may for 24 hours suspect scarlet fever. In preventing streptococcic infection, the throat, being the point of entry, must be kept scrupulously clean, and in my opinion this can not be done without douching with plenty of water, normal saline solution being as good as anything for this purpose. I believe very much in hydrotherapy. So far, I have not seen better results after the use of the serum. We should keep our patients in bed from two to three weeks even if they are without fever, to prevent complications especially endocarditis. We must limit the diet, using milk in the febrile stage, and keeping down the proteids during the whole course of the disease. These patients require careful attention for from six weeks to two months.

**Dr. Emil Amberg**: I do not believe in the douching nor in using the air bag during the acute stage of this disease.

**Dr. Donald**: There seems to be a fourth disease similar to scarlet fever which is a disturbing factor in diagnosis, as it is not clearly defined as yet. I have not been led to believe in serum therapy by my experience.

**Dr. E. S. Sherrill**: Having seen reports of Dr. Wigglesworth's happy experience in the treatment of scarlet fever with carbolic acid, I have

since used the same in my practice, giving from one to six grains every two hours, according to the age of the patient, and have been pleased with the results.

**Dr. Bigg:** I do not believe the white line following the drawing of the finger nail across the rash, to be pathognomonic.

**Dr. R. S. Rowland:** I would like to mention a case in which there was persistent vomiting. On urinary examination, acetone and diacetic acid were found in the urine. The administration of alkalies relieved the condition, and the patient made an uneventful recovery.

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### Michigan Personals

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Dr. O. M. Vaughan, of Covert, has been re-elected Superintendent of the Poor of Van Buren county.

Dr. Clarence E. Simpson, formerly on the staff of the Eastern Michigan Asylum, has entered practice in Detroit.

Dr. Bertha M. Lypps, U. of M. 1903, formerly of Memphis, Tenn., has been appointed assistant physician at the Pontiac Asylum.

Dr. W. A. Polglase has resigned as Superintendent of the Home for the Feeble Minded at Lapeer.

The following members of the State Society joined the American Medical Association in September: F. E. Barrett, Kalamazoo; L. S. Crotser, Petoskey; D. H. Eaton, Battle Creek; I. C. Foster, Albion; G. W. Green, Dowagiac; W. H. Haughey, Jr., Battle Creek; D. C. Howell, Onaway; A. A. McLarty, Manistee; A. J. Read, Battle Creek; W. H. Riley, Battle Creek; W. A. Stone, Kalamazoo; A. E. Stripp, Charlevoix; F. A. Van Sickle, South Frankfort; W. J. Wright, Gregory.

The Michigan United Railway has established a complete surgical system over its lines and has appointed the following surgeons: Lansing, Dr. Harry A. Haze, surgeon-in-chief; alternate, Dr. Robert E. Miller; St. Johns, Dr. Samuel E. Gillman; alternate, Dr. W. A. Scott; Jackson, Dr. C. G. Parnall; alternate, Dr. H. Duane Brown; Parma, Dr. Verne D. Farmer; Albion, Dr. Alfred J. Abbott; alternate, Dr. George C. Hafford; Marshall, Dr. L. A. Harmon; alternate, Dr. Frank M. Foote; Battle Creek, Dr. William S. Shipp; alternate, Dr. Clarence S. Gorsline; Augusta, Dr.

Charles E. Doyle, and Kalamazoo, Dr. Albert B. Cornell; alternate, Dr. Leonard H. Stewart.

Dr. Fairfax Irwin has succeeded Dr. S. B. Grubbs at the Marine Hospital in Detroit. Dr. G. C. Wollenberg is the new assistant surgeon.

Dr. J. W. Hoffman of Detroit and Miss Edna MacPherson were married September 26th.

Dr. George P. McNaughton has removed from Sault Ste. Marie to Standish.

Dr. J. E. Gilbert, formerly of Bay City, has located in Standish.

Dr. A. K. Warren, of Olivet, has removed to California.

Dr. Eugene Miller has been elected president of Battle Creek's school board.

Dr. J. C. Grosjean has removed from Pinconning to Bay City.

Dr. J. E. Cunningham, formerly of East Cohoctah, has located in Fowlerville.

Dr. A. E. Stripp, formerly on the staff of Kalamazoo Asylum, has entered practice at Charlevoix.

Dr. William L. Wilson and Miss Marguerite McConnell, both of St. Joseph, were married September 22.

Dr. E. T. Tappey, of Detroit, has returned from Europe.

Dr. David J. Hale, Fairplain, has returned from Panama.

Dr. G. M. Dunning, of Lansing, and Dr. Raymond D. Sleight, of Battle Creek, have gone to Vienna.

Dr. Mortimer Willson, of Port Huron, Councillor for the Seventh District, was thrown from his carriage on September 11th and though severely bruised, escaped serious injury.

Dr. George P. McNaughton, Sault Ste. Marie, has resigned as health officer and Dr. A. Harvey Miller has been appointed in his stead.

Dr. F. S. Bachelder, formerly of Asbury, Mo., has been appointed to the staff of the Eastern Michigan Asylum at Pontiac.

Dr. Ray C. Stone, recently one of the resident physicians at Harper Hospital, Detroit, has located in Battle Creek.

Dr. G. G. Taylor has removed from Allegan to Otsego.

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### Deaths

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Dr. David J. Irwin, for years a prominent physician of Lake City, died suddenly of heart failure. The night before his death occurred, Dr.

Irwin attended a farewell banquet at the Grand Central Hotel in honor of F. O. Gaffney, president of the village, who is moving to Cadillac.

Dr. J. L. Johnson, a pioneer resident of Chester, died September 14.

Dr. R. H. Sturgeon, Chicago Medical College, 1891, died at Iron City, September 28, from injuries received in a railway accident three days previously.

Dr. S. W. Van Sickle died at his home in Saginaw October 7, aged 57 years.

After a week's illness, Dr. Morse Stewart, Detroit's oldest physician, died at his residence on Jefferson avenue, October 10th.

An obituary of Dr. Stewart will appear in our next issue.

## Obituary

### DR. J. F. JENKINS.

Dr. John F. Jenkins, one of the oldest and most highly respected practitioners in southern Michigan, was found dead at his home in Tecumseh, October 12th. He was apparently as well as usual the day previous and his death was a great surprise and shock to the community.

Deceased was born September 10, 1836, in the town of Napanee, Lenox county, Ontario, Canada, and was of Welsh descent. His boyhood years were spent on a farm, and in attendance at a district school. He studied at the Napanee grammar school and in Newburg academy. He followed teaching, meanwhile studying in the Toronto Normal school, graduating in 1858. In 1862 he began the study of medicine, entering the University of Michigan. After receiving his diploma, he located at Orland, Ind. He married Miss Susan McQueen after locating, and in 1869 went to New York city, where he attended clinical lectures in the hospitals, including Bellevue and the College of Physicians and Surgeons. In 1870 he located in Detroit, where he remained for a short time, and then moved to Tecumseh.

Dr. Jenkins was a member of the Lenawee County, State Society and American Medical Association. He was a gentleman of refinement and education, occupying an enviable position as a physician, and was a general favorite socially and in the profession.

## Correspondence.

### To Chess Players:

The Tri-State Chess Association, an association of over 400 players, most of whom reside in the Mississippi Valley, is arranging a correspondence match at chess, the Doctors vs. the Laity. It is desired to have physicians from every section of the United States engage in this match. Therefore, every chess loving physician is urged to become a consultant in the case. The match will begin early in November and entries are accepted until Jan. 1. All who will play are urged to send name and address, to the president, stating the number of games they will take on. There is no fee attached to the match. Address,

DR. VAN NUYS, President,  
Lorain, Ohio.

Members of the profession are warned against the operations of one G. E. Simpson, who is fraudulently taking orders for "Surgery, Gynecology and Obstetrics," published by the Surgical Publishing Company of Chicago and under the managing editorship of Franklin H. Martin, M. D.

Many doctors have already been victimized by this man to the extent of paying cash for orders for the journal or giving him checks payable to his own order and this notice is published in the interest of the profession and for the purpose of putting a stop to his further operations.

Secretaries of local medical societies are requested to warn the members of their societies against his operations.

As the Journal goes to press the McCormack meetings are in progress throughout the State. A full account of the various addresses will appear in the December issue.

If a patient gives a history of "sprained wrist" that has remained feeble and painful in spite of appropriate treatment for sufficient time, and if the wrist presents thickening and tenderness at its radial aspect, a diagnosis of fracture of the scaphoid should be entertained. Colles' fracture must be excluded, by the relation of the two styloid processes and the location of the deformity. Fractures of the radius and scaphoid may, however, coexist.

Long pauses between attacks of gastric or abdominal pain speak in favor of cholelithiasis.



## Progress of Medical Science

### MEDICINE

Conducted by

T. B. COOLEY, M. D.

**Measuring the Power of the Heart.**—LEVY discusses Katerstein's method of estimating the functional capacity of the heart, and analyzes a series of determinations made by himself. The method consists in determining carefully the normal blood pressure and pulse of the recumbent patient, then shutting off both femorals at Poupart's ligament by pressure with the middle finger of each hand. With normal heart power, the pressure should rise in a few minutes 5 to 15 mm. while the pulse remains the same or is slowed somewhat. The pressure returns to normal soon after the compression is released. If the heart is hypertrophied, the pressure usually rises more than 15 mm. A slightly weakened heart is not able to cause the rise in pressure, while with a very weak one, a fall instead of a rise is noted. In both of these cases there will be more or less acceleration of the pulse rate. When, in the case of a hypertrophied heart, the rise is less than 15 mm., it seems to indicate functional weakness or failure of compensation. The fall instead of a rise in pressure seems of the greatest practical importance in the toxic heart weakness of acute infection. LEVY, in his series of determinations, found the method reliable within certain limitations, and of considerable clinical value. It is not reliable with persons who are nervous or readily susceptible to psychic impressions.—*Zeit. f. klin Med.*, 60, p. 74.

**Local Treatment of Diphtheria with "Pyocyanase."**—ZUCKER reports 32 cases of diphtheria and 3 of non-diphtheritic angina in which "Pyocyanase" was used as a spray, either alone or with anti-diphtheritic serum. Pyocyanase is a "heteroform" enzyme obtained from cultures of *B. Pyocyaneus*: that is, an enzyme having bacteriolytic properties against the diphtheritic bacillus, the staphylococci and the streptococci, as well as against the pyocyaneus. It is said also by its combination with body proteids, to confer some protection against the diphtheria toxin. Eight cases of diphtheria were treated with Pyocyanase alone and 24 with Pyocyanase and anti-toxin. All of the 32 recovered, as did the three of non-diphtheritic angina.

In the eight cases treated without serum, the membrane disappeared quite rapidly (3 or 4 days), the disappearance seemed to be more by gradual solution of the membrane than by falling or peeling off, as with serum. It was also noted that the fetor of the breath was quickly lost, that the temperature was kept down, and the general condition improved rapidly. These eight cases

were of the type which in pre-antitoxin days would have had a mortality of about 12 per cent.

The 24 cases treated with Pyocyanase and antitoxin were more severe, and included one quite grave case. The largest amount of antitoxin used was 3,000 units. The same peculiar solution of the membrane was noticed as in the others.

ZUCKER does not recommend the use of Pyocyanase without antitoxin, but believes it to be a valuable adjuvant, especially where the membrane is slow to disappear. No mention is made of its use to rid the throat of the bacilli remaining after recovery. The report is from the diphtheria wards at Graz.—*Archiv. f. Kinderheilkunde*, 44, p. 95.

**Metabolism in Basedow's Disease.**—CLEMENS gives the results and conclusions obtained in a series of metabolism observations in cases of this disease. The determinations made were: specific gravity, chlorides, urea, phosphoric acid, and the patient's weight. In general the amount of urine varies with the sums of the solid constituents rather than with any one of them, as does the specific gravity. The chlorides are usually increased. Considerable daily variations are noted in the total solids and chlorides. The greatest quantitative variations from the normal are found in the nitrogenous constituents of the urine. The nitrogen balance may be either positive or negative, usually in the well developed case with progressive emaciation, it is negative; but no conclusions as to prognosis are to be drawn from this fact, as death occurs quite as often in cases with positive nitrogen balance. The absolute amount of nitrogen excretion seems more important. This is usually considerably increased. The extractives seem to be chiefly concerned in this increase.

Phosphoric acid is also often increased.

The body weight, owing to this increased elimination of solids and water, usually diminishes, and in this loss, poor appetite and defective assimilation very seldom play any part.

In general, the metabolic disturbances in the disease correspond to the result of feeding thyroids to normal individuals. Feeding thyroids to the patients increases the disturbances.

CLEMENS gives tables and curves showing the good effects of hospital life and specific (antithyroid) treatment in the metabolism; states his belief that simple methods of analysis may give useful indications for diet and therapy.—*Zeitsch. f. klin. Med.*, Vol. 59, p. 233.

## SURGERY

Conducted by

MAX BALLIN, M. D.

**Inflammation of Intestinal Diverticula.** (Diverticulitis.)—It has been known for a long time that intestinal diverticula are a frequent cause of intestinal obstruction and of fecal fistulas of the umbilicus and also of cystic tumors of the abdomen, but it is only recent knowledge that such diverticula can be the seat of acute, chronic or recurring inflammation, just as it occurs in the appendix. CAHIER has observed such a case of recurring diverticulitis, which he operated upon during the interval, considering it a case of appendicitis. Looking up the literature he found 36 such cases on record, 13 of which were discovered in autopsies, the other 23 being found as a surprise by the surgeons.

Intestinal diverticula are divided into two kinds (1) true and (2) false.

The true, or Meckel's diverticula, are of congenital origin and characterized by the following peculiarities: There is never more than one present in the intestinal canal; its wall is identical with the intestinal wall; it is usually situated in the second part of the ileum, and rarely on the cecum; is usually longer than 2 centimeters; ends in a fibrous cord; frequently adheres to the umbilicus or mesenterium or intestine; is usually attached to the intestine at a right angle to its free border and, as mentioned before, it is of congenital origin. Exceptions from these rules occur.

The false diverticula are really hernias or eversions of the mucous membrane of the intestine through the muscular coat; are usually multiple; can occur on any point of the intestine and do not reach the length of 2 centimeters; communicate with the intestine with a small ring; do not have all the coats of the intestines, according to their origin and are not congenital, but acquired.

CAHIER shows in 39 cases of the literature, that all of these diverticula, especially the congenital ones, can be the place of an inflammation, identical in character with the different types of appendicitis.

To mention 2 characteristic cases of this kind.—

(1) A young man, 18 years old, had attacks of colic for several years, from time to time diarrhea, and once a slight amount of blood in the stool. The attacks were very severe, with colicky pain referred to regions to the right of the navel and continued from a day to several weeks. A laparotomy was performed during an attack, as all signs of appendiceal abscess existed. In the operation an abscess was found that communicated with a diverticulum, 7 centimeters long, and attached to the ileum about 1 meter above the ileocecal junction.

(2) A man, 54 years old, who for several years was troubled with abdominal pains. For 3 days he suffered severe pain, vomiting, tympanitis—all signs of severe peritonitis. Diagnosis was made of general peritonitis of appendicular origin. The operation confirmed this diagnosis as to the peritonitis, but showed that it started, not from the appendix, but from a large Meckel's diverticulum. The patient died, and the autopsy showed a healthy appendix and a solitary large diverticulum of the ileum, 50 centimeters from the ileo-cecal valve. The diverticulum showed all signs of inflammation, round cell infiltration, folliculitis and peri-folliculitis, adhesions to the surrounding organs,—briefly a peritonitis starting from an inflamed diverticulum. Cases of typhoid perforation of intestinal diverticula are also known.—Leon Cahier, Paris, *Revue de Chirurgie*, No. 9, 1906.

### Transplantation of the Thyroid Gland Into the Spleen.

—The spleen has excellent properties for successful transplantation of other organs, a fact due to its peculiar rich circulation. The circulation in the spleen is very quickly re-established and only a very small part of the transplanted tissue becomes necrotic. The greatest danger of transplantation into the spleen is hemorrhage. In numerous experiments on animals, PAYE prevented bleeding by making a short incision into the capsule of the spleen and bluntly forming a pocket in the pulp of the spleen. The transplanted tissue is pushed into this pocket so that it fits in tightly and the capsule of the spleen is sutured over it. The sutures are covered with omentum. In this way the transplanted tissue acts like a gauze packing. PAYE succeeded with this method in keeping animals alive for 300 days after complete thyroidectomy, without any symptoms of myxoedema or tetany arising. It seems, therefore, that the transplanted gland in the spleen remains functionally active. PAYE has used this method in one case on man. A child 6 years old, suffering from a very severe case of myxoedema and entirely idiotic, had been treated for 3½ years with internal administration of thyroid extracts without any improvement. PAYE transplanted a large piece of the thyroid gland, taken from the mother of the child, into the child's spleen. The result was satisfactory, as the child started to grow bodily and gain intellectually very markedly.

Glandular organs with so-called internal secretions, seem to be better for this method of transplantation than other glands.—*Archiv. fuer klinische chirurgie*, Vol. 80, page II.

## PATHOLOGY AND BACTERIOLOGY

Conducted by

A. P. OHLMACHER, M. D.

**Notes on the Pathological Anatomy of Epidemic Cerebrospinal Meningitis.**—WESTENHOEFFER made some very thorough autopsic studies, gross, microscopical and bacteriological on the material obtained during the 1905 epidemic of spotted fever in Upper Silesia. Under his personal supervision 29 cases were examined. Aside from the intraspinal and intracranial lesions usually described special stress is laid upon the affection of the fauces, nose, the cranial sinuses and the ear. By systematically carrying his examination of the head to the point of including all these structures, WESTENHOEFFER was able to establish the existence of inflammatory lesions in the naso-pharynx. In all his cases, both acute and chronic, hypertrophy, congestion and hypersecretion of the faucial tonsils could be demonstrated, accompanied less uniformly with inflammation of the whole naso-pharynx, the Eustachian tubes and the posterior portion of the nasal mucosa. It is noteworthy that the mucosa of the anterior nares was not affected. Meningococcic otitis media was encountered in 17 of the 29 cases, being particularly pronounced in the younger children. In cases beyond the third year of life affection of the sphenoidal sinus was discovered in 92 per cent of the cases. The maxillary sinuses and ethmoidal cells were infrequently involved, but acute inflammatory swelling of the cephalic and cervical lymph glands was found with unfailing regularity. The comparative infrequency of ethmoidal infection (7 per cent) beside the very commonly encountered disease in the faucial tonsil, middle ear, and sphenoidal sinus (90 to 100 per cent) is strongly emphasized. A further finding of much importance is that of the anatomical anomalies (enlarged or persistent thymus, hypertrophy of lymphadenoid structures of the gastrointestinal tract, etc.) of status lymphaticus. Thus in all cases the faucial tonsils were enlarged; as was the thymus of children, while that of the adults was distinctly lymphadenoid in structure. Swelling of Peyer's patches and the solitary intestinal follicles was present in 12 children, along with hypertrophy of the mesenteric glands; and general enlargement of the lymph glands was encountered in 6 cases.—*Arbeiten über Uebertragbare Genickstarre in Preussca in Jahre 1906.*

**The Infection Atrium in Epidemic Cerebrospinal Meningitis.**—Based upon the results of his anatomical and bacteriological studies WESTENHOEFFER concludes that the meningococcus most frequently finds its way through the medium of the inspired air direct to the naso-pharynx, and sets up a primary focus of infection in the

lymphatic naso-pharyngeal ring. From here the process readily spreads to the sphenoidal sinus and the middle ear. Whether meningococcal infection occurs by the lymph or blood route and by what particular pathway, is not clear, though anatomical evidence speaks most forcibly for the hematogenous method. Failure of the meningococcus to lodge and produce lesions in the nares or in the ethmoidal apex of the nose explains the frequent negative results of bacteriological examination of the secretions from this region. On the other hand, the uniform prevalence of naso-pharyngeal infection and the ease with which meningococci are cultivated from secretions obtained directly from this locality has furnished an additional diagnostic procedure of much value. Flügge has devised a special sound for obtaining *per os* the naso-pharyngeal secretion unmixed with that from other regions. *Ibid., Dritter Teil.*

**Status Lymphaticus as a Predisposing Factor in Cerebrospinal Meningitis.**—Strongly impressed with the frequency of status lymphaticus in the victims of epidemic meningitis, WESTENHOEFFER expresses the opinion that a casual relationship may exist between the lymphatic constitution and the infection. In fact, he makes the unqualified assertion that epidemic cerebrospinal meningitis attacks especially individuals with status lymphaticus (lymphatism). Many children in the Silesia mining districts in which the epidemic of meningitis was most severe were found to present hypertrophy of the cervical lymph glands and other evidences of lymphatism, and the author believes that the unsanitary surroundings, insufficient clothing and poor food of these children of the laboring class explain in some measure at least the prevalence of status lymphaticus. It has been shown by Scheiers that the blood of these lymphatic subjects is more impoverished in hemoglobin, and especially that the number of phagocytic leucocytes is reduced as compared with the normal; thus explaining why status lymphaticus lowers resistance to the various forms of acute infection including that by the Meningococcus. *Ibid., Dritter Teil.*

(*Reviewer's Note.* Blood infection by the meningococcus, especially that demonstrated by blood cultures obtained from the living patient has been demonstrated in this country by Elser of New York and others, and it is quite probable that further observations will establish this as a frequent phenomenon. Status lymphaticus has also been described by Elser in the report upon cases of meningococcic meningitis studied by him in New York during the epidemics of 1904 and 1905.—A. P. O.)



## PHARMACOLOGY AND THERAPEUTICS

Conducted by

C. W. EDMUNDS.

**The Fallacy of Intestinal Disinfectants.**—*The Boston Medical and Surgical Journal* exposes this groundless chimera. It may be conceded that by means of voluminous enteroclysis a disinfectant might be brought into direct action upon the affected structure, but it is nothing of that sort that we have in mind; it is the notion of producing an antiseptic effect upon the membrane involved by giving a medicine by the mouth, either a chemical compound or one or more essential oils. Let us reflect upon what must happen when any such substance is swallowed. Suppose it is not absorbed into the blood, but passes through the alimentary canal more or less unchanged, to be finally discharged by the anus. In its passage it would hardly come in contact with the intestinal mucous membrane, except in such minute amount and in such a state of dilution as to be practically inoperative. Even if the object was simply to disinfect the fecal contents, it would be necessary to administer far greater quantities of the drug than the alimentary canal would tolerate. But that is not the object; what is aimed at is the direct action of the medicament on the mucous coat of the intestine itself, and, to reach that structure in appreciable amount, it would require to be given in still great quantities, such as nobody would dream that it was safe to employ.

Suppose on the other hand, that the drug is absorbed from the stomach into the blood. To exert any action upon the intestinal mucous membrane, it would have to be eliminated by that membrane. If there is any antiseptic substance which, taken by the mouth, is so eliminated, we may expect the desired effect in degree proportioned to the amount that can safely be administered. But that degree must be infinitesimal so far as known medicaments are concerned and we can hardly conceive that any will ever be found that, given in reasonably safe amounts, will meet with intestinal elimination in quantities sufficient to exert a decided antiseptic action upon the mucous membrane of the intestine. Hence we must look upon the intestinal disinfectant as a chimera.—*Medical Standard*, Aug., 1906.

**The Treatment of Emaciation.**—L. BREISACHER, Detroit, finds that leanness may be due to various causes. It is sometimes apparently hereditary, but may arise as a primary or secondary

condition. The one great cause, excluding certain emaciating chronic diseases, is insufficient amount of food which may be due to loss of appetite from physical or mental causes, or the result of faulty dietetic habits which are sometimes handed down in families from generation to generation. Frequently, it results from an ignorance of the nutritive significance of particular foods or is the effect of eating but one or two meals a day in persons not fitted for such a regime. It may be due to poverty or nervousness, sexual neurasthenia or hysteria. These latter predominated, together with digestive abnormalities in the majority of his cases, and he has also observed attendant arteriosclerosis and insomnia, which are given by Cabot as causes, in a number of his cases. To a second group of causes belong the gastrointestinal disorders, mechanical or secretory, which he observed in nearly all his patients. He thinks that there is no doubt that the foundation of these disorders is often laid in the artificial feeding of infants. He also mentions the improper metabolism of food and increased oxygenation in the blood which can not be precisely defined. In the treatment, therefore, it is advisable to make thorough examinations for all possible conditions and to ascertain to what degree the stomach and bowels will bear forced feeding and what food will be best taken, digested and absorbed. With these points determined, he maps out a diet list containing from 2,200 to 2,500 calories, and gradually increases this to from 3,800 to 4,500 calories. This extreme diet is divided by him into 250 grains of fat, 150 of albumin and 400 of carbohydrates, amounting altogether to 4,580 calories. He also gives tonics and pushes them to the physiologic limits if necessary. In nervous individuals he uses nerve sedatives, but never narcotics. From time to time he notices the excretory activity of the kidneys and compares it with the water intake, which should be from 2,000 to 3,000 c. c. Exercise is lessened or increased according to the demands of the case, and BREISACHER also uses tepid baths, cold rubs, massage and electricity. Under this treatment patients often gain very rapidly in weight, calling sometimes for reduction in diet. The chronic underfed usually require from two to six months' careful treatment of this kind.—*J. A. M. A.*, Aug. 25, 1906.

## NEUROLOGY.

Conducted by

C. W. HITCHCOCK, M. D.

**The Insane Lovers.**—Under this caption STEVENS discusses those psychiatric cases in which illusory and delusive *affaires du cœur* play a prominent part, cases which often prove annoying in the extreme to the physician in charge.

These patients may be perfectly clear and rational on all other subjects than their one delusion and are able at times to present their delusion to others with such force and semblance of truthfulness that now and then friends are led to believe the patient's statement and believe that she is a much wronged if not criminally abused person. It becomes important therefore that these cases should be recognized early and the patient placed under suitable protection for the accompanying eroticism may easily make her the victim of the designing and unscrupulous.

While these cases do not constitute a class apart, it is pointed out that they commonly come from the subjects of three mental diseases, paranoia, dementia praecox, and manic-depressive insanity. With the paranoiac, the love affair is a part of the systematized delusions which the patient builds up, developing upon a basis of constitutional defect. The heredity and early history of these cases is important to the clinician.

In mild cases, the delusion may go for some time unrecognized. Simple events are after a time construed as conclusive proof of the truth of the delusion and retrospectively, memory is falsified to bolster up the same. Eventually the patient is apt to become illogical and inconsistent, when the delusion is entered upon in discussion.

In some cases other delusions are present, in others marked delusions of grandeur and persecution and in still others there is only a distant and altruistic affection, the object of which is not vigorously or annoyingly pursued.

Dementia praecox affords an occasional case as also does manic-depressive insanity. The early dement, if restrained from seeking the object of his love, makes no strenuous objection and builds up no systematized delusion. On the contrary, his delusions are often silly, and absurd hallucinations are often prominent. He eventually settles down into the dementia which is to be his portion.

In the manic-depressive cases the amatory de-

lusions are usually only present during a manic period, when erotic manifestations are common, especially among female patients. As the degree of excitement increases the patient is apt to be more open and shameless in declaring her groundless love and finally may even expose her person and make improper proposals. Such patients are obviously better protected under institutional care and the skilled observation of those who know what is to be expected in these cases.

The history of several illustrative cases is given.—*Medical Record*, Aug. 18th, 1906.

**The Distribution of Afferent Nerves in the Skin.**—VON FREY, of Würzburg, in an address before the Section on Pathology and Physiology of the American Medical Association at its recent Boston session, discussed interestingly this subject. While to Sherrington we owe much of our knowledge in this field, he points out that methods used have ignored the functional differences of the afferent fibers and that most physiologists are now agreed that sensory functions of the skin are based on four fundamental qualities mediating the sensations of warmth, cold, touch, and pain. Correspondingly, the skin nerve-supply is a four-fold one.

VON FREY has found the skin specially sensitive at certain spots and having located the touch-spots finds that they react in a certain way to various kinds of stimuli, e. g., the touch-spots react to an alternating current of minimal strength by a vibrating sensation similar to that called forth by a tuning fork, while in the spaces between the touch-spots the same current is felt as a non-vibrating painful prick, one end-organ reacting more quickly than the other. Similar phenomena exist as to temperature and a large number of cold-spots and a more restricted number of warm-spots may be mapped out. If the temperature of the skin is lowered the cold-spots are stimulated and similarly, if it be raised, the warm-spots respond. The touch-spots do not respond to thermal stimuli.

He roughly estimates that on the skin of the trunk and limbs there are about 30,000 warm-spots, 250,000 cold-spots, and 500,000 touch-spots.—*Jour. Am. Med. Assoc.*, Sept. 1, 1906.



## OPHTHALMOLOGY.

Conducted by

W. R. PARKER, M. D.

**Concerning the Signs in the Retina of Persistent High Arterial Tension and Their Diagnostic and Prognostic Import.**—DE SCHWEINITZ divides eye ground lesions of persistent high arterial tension, when a symptom of arteriosclerosis, into *suggestive* and *pathognomonic*.

The suggestive signs include uneven caliber and undue tortuosity of the retinal arteries, increased distinctness of the central light streak, an unusually light color of the breadth of the artery, and alterations in the course and caliber of the veins.

The pathognomonic signs include changes in the size and breadth of the retinal arteries of such character that a beaded appearance is produced; distinct loss of translucency; decided lesions in the arterial walls, consisting of white stripes in the form of perivasculitis; alternate contractions and dilatations of the veins, and particularly; and this is the most important of the signs, indentation of the veins by the stiffened arteries in the same manner as a solid rod would indent a rubber tube where lying across it. Sometimes the vein is simply flattened slightly at the point of crossing, or merely pushed aside, or its caliber is contracted, so that beyond the point of crossing there is an ampulliform dilatation. In addition to these well known signs, there may be changes in the venous walls, so that they are bordered with white stripes, and the veins may be exceedingly tortuous and contain varicosities. Finally, there are edema of the retina in the form of gray opacity around the disc or following the course of the vessels, hemorrhages manifesting themselves as linear extravasations, or rounded infiltrations, or sometimes assuming a drop-like form.

1. The Age at Which These Signs May Occur.—Quoting Marcus Gunn, "Old age alone does not produce these changes." All can substantiate his statement that perfectly healthy retinal vessels are often seen in persons who have reached old age—even 70 or 80 years of life. May occur as early as 37.

2. The Earliest Indications.—As has been stated in the beginning of this communication, certain of these signs are only suggestive, and they have already been enumerated and must not be disregarded if they are associated with other symptoms of the disease. According to my experience, three signs may be seen very early, as follows:

(a) A markedly corkscrew appearance of certain arterial twigs, either of those which skirt the macula or, more significantly, of one or more

small branches which arise from the larger vessels of the main distribution, which themselves are apparently normal. In other words, and this has been noted many times before and is also referred to by Mr. Gunn, the whole artery is not affected. This is a particularly striking feature if, as is frequently the case, a single twig descends vertically from a transverse branch and assumes this corkscrew condition.

(b) A flattening of a vein where it is in contact with an artery, and at this point it has somewhat the appearance that a strap would have if laid across a solid tube, provided vein passes over the artery. If the artery passes over the vein, the appearance is analogous to that which would be produced if the strap were placed across the lower surface of the tube. The vein is only slightly compressed at this stage, but is not yet indented sufficiently to produce an ampulliform dilatation of the vein beyond the point of crossing. It has seemed to me that this appearance is a little more frequent in the inferior temporal retinal vessel distribution than elsewhere or perhaps, to speak more accurately, appears there first.

(c) The nerve-head has an appearance often loosely described as "congested." But this appearance differs from that presented by the so-called streaked hyperopic disc; it is unlike the flannel-red surface of the papilla which merges into an equally flannel-red eyeground, so commonly the result of eye strain, exposure to bright light and intense heat, or seen in certain constitutional conditions; and, finally, may be distinguished from the early stage of neuritis, with the somewhat juicy red aspect of the disc. It is a dull red appearance which is presented and differs from the franker congestions, as the unhealthy flush of a cheek differs from the brighter color of a normal blush. Subsequently the later signs develop: marked indentation of veins, with ampulliform dilatations beyond the point of pressure, varicosities, "silver-wire" arteries and perivasculitis, hemorrhages, etc.

3. Significance of the Signs.—The facts just detailed and the appearances described are well known, and hence we may consider them immediately from the diagnostic standpoint. It is undoubted that these retinal vessel changes have not merely a local significance; but are one of the most important indications of that condition to which the term arteriosclerosis is usually given.—*Ophthalmic Record*, August, 1906.

To be continued.



## OTOLOGY.

Conducted by

EMIL AMBERG, M. D.

**Bier Treatment of Otitis Media.**—F. ISEMER, speaking of the clinical experiences with congestive hyperemia after Bier in the treatment of Otitis Media in the University Ear Clinic in Halle, comes to the following conclusions: (1) The treatment of otitis media by congestive hyperemia is not without danger. While confining our treatment to this therapy the timely application of necessary surgical interference may be neglected and thereby the disease may end seriously. (2) It must be reserved for further tests in stationary clinics to decide in which forms and in which stage of inflammation we may be permitted to try congestive hyperemia; also how long we may continue the same before we must interfere surgically. (3) Especial dangers seem to be caused by prolonged application of congestive hyperemia in diplococcus otitis, which, as we have known for a long time, is characterized by peculiar clinical symptoms. (4) Absolutely rejectable is every trial with congestive hyperemia in intra-cranial complications (lateral sinus thrombosis, extradural abscess, brain abscess).—*Archiv fuer Ohrenheilkunde*, August, 1906.

**Paralysis of the Abducens in Otitis.**—ALEXANDER BAUROWICZ (Krakau) reports a paralysis of the abducens caused by otitis in the left ear in a lady 16 years old. The patient suffered for two and one-half days from an otitis media before a spontaneous perforation took place. Incision at the time of the first consultation, the evening before, had been refused. On the third day after the perforation facial paralysis occurred and two days later the abducens was paralyzed. The patient saw double looking toward the left side. There was little secretion with plain pulsation in the opening and the patient felt excellent. The fundus of the eye was normal. On the 15th day of the disease the secretion had stopped, double vision was absent. On the 20th day the facial paralysis had disappeared.

BAUROWICZ mentions that most frequently a meningitis confined to the tip of the petrous bone is given as cause of the paralysis of the abducens where the nervus abducens entering the dura can become diseased, in other cases a reflex paralysis through the vestibular nerve is spoken of. Furthermore, a propagation of the inflammation in the vein sinus of the carotid channel extending to

the cavernous sinus and abducens nerve can cause the paralysis, also an infectious neuritis has been accused and finally a paralysis by pressure in leptomenigitis serosa and extradural abscesses has been established. BAUROWICZ says that the fact must be noted that a paralysis of the abducens nerve can be caused by an inflammation confined to the middle ear.—*Monatschrift fuer Ohrenheilkunde*, etc., September, 1906.

**Hallucinations and Ear Diseases.**—BRYANT mentions that the writings of a number of observers shows that in the majority of cases of auditory hallucinations the patients are also suffering from ear disease. In a remarkably large proportion of the cases of auditory hallucination, tinnitus aurium is noted, and a large number of cases of auditory hallucination have disturbed aural functions of the kinds which are usually associated with tinnitus. Many authors have found that when ear disease is present the unilateral auditory hallucinations are lateralized on the same side as the ear lesions.

Tinnitus may be classified as follows from a psychic point of view: (1) The largest class, in which the tinnitus is not heeded by the patient; (2) where it is the object of mental disquiet in psychopathic patients, the tinnitus causing many nervous disturbances, as hypochondria, neurasthenia, or melancholia; (3) where the tinnitus causes auditory hallucinations; group (a) hallucinations which are of slight import and are usually conscious; (b) unconscious hallucination, but of no great psychic importance; (c) true delusions, finally becoming organized.

The writer comes to the following conclusions: The evidence points to some connection between ear disease and hallucinations of hearing other than mere coincidence. It is probable that hallucinations of hearing originate in subjective ear sensations in most cases. Cure of the coincident ear disease cures or assists the convalescence from the psychoses in a notable number of cases. Some cases of insanity appear to be excited by ear disease and the convalescence of insane cases is delayed by the presence of ear disease. Unilateral hallucinations of hearing are unquestionably due to unilateral ear disease.—*Jour. of Nerv. and Mental Disease*, September, 1906.

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## Original Articles

### THE PHYSICIAN AND THE MEDICAL SOCIETY\*

A. I. LAWBAUGH, M. D.  
Calumet.

#### *Fellow Members of the Upper Peninsula Medical Society:*

I wish to thank you for the great honor you have done me in electing me as your presiding officer at this meeting. In looking over its history and recalling the names of the men who have been thus honored, I am filled with no small degree of embarrassment in assuming the duties and responsibilities of the position, and at the same time am led to more fully appreciate the honor thus bestowed.

With a view to presenting certain considerations which lead to the usefulness of a medical society, I have been led to study some of the objects of such a society.

I believe the duties to be threefold; first to the society, next to members with each other and the profession at large, and lastly to the general community.

As to the relations and uses of the society in regard to the profession, I cannot give you any outline better than the one formulated at the organization of the Litchfield County (Connecticut) Medical Society in the year 1778. I think that the statement of the conception of the uses of a medical society entertained by our good medical forefathers in 1778 is not out of place here. Changed conditions have changed some of the objects, but in the main they hold good today. I quote:

"This society was formed on the most liberal and generous basis and principles, and was designed,

"First, To lay a foundation for that unanimity and friendship which are essential to the dignity and usefulness of the profession.

"Second, To accomplish this, they resolved to meet once in three months.

"Third, That in all cases where coun-

\*The Presidential Address, delivered at the annual meeting of the Upper Peninsula Medical Society, (Twelfth District Society) August, 1906.

sel is requisite, they will assist each other without reserve.

"Fourth, That all reputable practitioners in the county who have been in the practice for one year or more may be admitted members.

"Fifth, That they will communicate their observations on the air, seasons and climate, with such discoveries as they may make in physics, surgery, botany and chemistry, and deliver faithful histories of various diseases incident to the inhabitants of this county, with the mode of treatment and event in singular cases.

"Sixth, To open correspondence with the medical societies in the neighboring states and in Europe, for which purpose they have a standing committee of correspondence.

"Seventh, To appoint a committee for the purpose of examining candidates for the profession, and to give certificates to the deserving."

This latter clause is now obsolete. Our medical colleges provide for the education of the student until he reaches the point of graduation. This is in many cases supplemented by hospital appointment and training, and there is no physician. I take it, even though but recently graduated, and certainly not one among those who have supplemented their college course by a hospital training, who will for a moment contend that their medical education has ended with their graduation. In fact, we regard it as being but fairly begun, and to the studios, that which takes the place of an educational force after graduation, aside from books and journals, must be the post-graduate course, either a school or a society.

But books and journals, while having their place, however, do not give that subtle something which comes from the friction of mind with mind and the interchange of practical experience. To my mind a most potent means for the physician once out of college to "keep up," to be refreshed and to acquire progress in medicine, is by membership and participation, mind I say *participation*, in a good, live, medical society. As Dr. Osler very aptly puts it: "Fie upon the man who knows it all and gets nothing from the society, and hence does not become a member! He reminds one of that little dried-up miniature of humanity, the premature senile infant, whose tabetic marasmus has added old age to infancy, and hence from beginning to end amounts to nothing in this world. Why should he go to the society, and hear Dr. Blank on the gastric relations of neurasthenia, when he can get it all and so *much* better in the works of Einhorn and Ewald? It is a waste of time, he says, and he feels better at home; and perhaps that is the best place for that type of man, who has reached this stage of intellectual stagnation." Many of us know just such doctors among our professional brethren. I say this because I believe the sober judgment of the profession will bear me out in the assertion.

When a young man begins the practice of medicine, there is a "sit and wait period," which should be most zealously employed in preparation for the time of greater professional activity which should normally follow. From this patientless beginning up to the time and including the so-called "eighty visits a day man," there is constant need of study and work



if one is to keep up with the tremendous strides in medicine, unless one is of such great wisdom that it is a waste of time and money to buy books and journals and in reading the same, giving as evidence that his death certificates are no more numerous than the one who thus employs himself.

I am not sure but the busy and successful practitioner needs the help of the medical society more than the fledgling. It is from journals and books and in the medical society that knowledge and familiarity with what is new in medicine must be learned, and wise is the doctor who early discerns that a membership in an active medical society is one of the best means of keeping in touch with the **best**, both in **science** and of **men**, that is worth knowing in his profession. As Prof. Osler says, "The society should be a school in which the scholars teach each other," and there is no better way than by the demonstration of the more unusual cases that happen to fall in the way of every physician.

Why is it that a large majority of all practitioners are not members of the medical society? "Dr. Simmons, editor of the A. M. A. Journal, estimates that there are 17,000 physicians in the United States who do not belong to any medical society whatever. In part this is due to the apathy of the officers, and failure to present an attractive program, but more often the fault is the men." Perhaps, given over wholly to commercialism, a doctor feels it a waste of time to join a society, and that he might miss a call while attending a meeting of the society. This applies to the one in the profession who is in it only for the money he can get out of his patients, without regard to

the sacred obligation to put himself in the best position possible to do the best that is known for them.

It should be an opprobrium to anyone of us to be known in our community as a "dollar doctor;" but rather to be known, loved and mourned as Dr. William MacLure of the Glen, when the text chosen for him was, "Greater love hath no man than this, that a man lay down his life for his friends."

Returning to the platform of the Old County Society, I quote: "A foundation for the unanimity and friendship which are essential to the **dignity** and usefulness of the profession." What better statement could we make now than was written more than a hundred years ago of the dignity which our profession would hold before the public, and its usefulness as well, did the profession possess the unanimity and friendship here spoken of? It seems but necessary to mention to recognize the value.

How often do we find that the man whom we thought from rumors of disgruntled patients, or envy of rival practitioners, to be a man of "hoofs and horns," in reality, when we come to meet him personally, is a gentleman, both professionally and socially, requiring the clearing house of the medical society, where we not only acquire new medical knowledge, but also a better and higher opinion of our fellow practitioners. How hard it is to believe evil of those whom we know best, and how slow we are to believe slander and gossip about those with whom we are well acquainted. Acquaintances engender knowledge and sympathy. "Sympathy reveals community of interest, community of interest fosters organization, and organization

brings power and influence;" and this brings another phase of the use of a medical society, namely, its relation to and influence on the community.

We have a duty to our patients, but we have a duty to the community in which we live, not only as physicians, but as citizens. Individual and organized effort have been eminently useful in guiding and influencing public sentiment in sanitary matters, in milk supply, in showing the folly and danger in the use of patent medicines, in education in our public schools, and in many other public and municipal matters, and every medical society should be active in such matters for the public good.

I quote you the following as a worthy precept and guide: "The true physician should be a gentleman of broad culture, learned in the basic sciences on which modern scientific medicine is founded, availing himself of all means within his power to advance his knowledge, to test his conclusions, and protect his patients, to be so educated and so conduct himself as to compel the citizen to distinguish between the high-minded members of the profession and the quacks, to support wise measures for the public good."

Many physicians still fail to realize the importance of this unity of effort, and the good that must eventually come from

it, not only to ourselves, but to the community. It is the physician's duty not only to be a good doctor, but would he exercise the influence he ought, he should extend his culture, and make himself an intelligent force, a force which exercised through an organized body of medical men is bound to make itself felt. It is my desire to impress the fact that to know one's business may be the whole duty of the medical man, it is **not** the whole duty of the cultivated physician, **not** the whole duty to himself, not to the standing of his profession before the public.

For our welfare it behooves us as members of a learned profession to prevent any possibility of our descent to the level of a trade. But let not the thought be lost sight of that the duty of the physician, first and foremost, is to perfect himself in his knowledge of medicine, and while the laborer is worthy of his hire, yet we must not subvert all good work merely for the purpose of gaining the "dollar."

In conclusion, I would earnestly urge upon all the necessity of giving faithful support to medical societies, impressing thereby upon the community our loyalty to our colleagues and a desire to benefit our fellowmen.

I thank you for your attention.

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**The X-Rays in Leukemia and Hodgkin's Disease.**—A. H. ROTH, Ann Arbor, Mich., reports two cases treated with the X-rays; one of Hodgkin's disease, in which the relief of symptoms was obtained, though they probably may recur unless the treatment is continued, and one of spleno-myelogenous leukemia, in which the continued application of the rays for over a year has brought the blood down to the normal and largely reduced the splenic enlargement. Arsenic used as an adjunct to the treatment seemed

to be of benefit. The first effect of X-ray treatment was to increase the number of leucocytes in the general circulation. This was accompanied by a large increase of degenerate cells, most of them disintegrating myelocytes. No toxic symptoms have developed in the patient, and though the blood count has remained normal for two months, the continued use of the X-ray at intervals is advised to prevent possible recurrence.—*J. A. M. A.*, October 20, 1906.







**Morse Stewart, M. D.**  
**1818 = 1906**

## NOTES ON THE LIFE AND TIMES OF DR. MORSE STEWART\*

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LEARTUS CONNOR, A. B., M. D.Detroit.

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To practice medicine sixty-four years, retaining the confidence of clients, the affection of friends and the respect of all, is a record worthy of careful study.

Dr. Morse Stewart's ancestors were Scotch, occupying the north of Ireland, one of whom, Alexander Stewart, settled in Connecticut in 1719 and with his descendants took active part in events which produced the American Republic. Early in the nineteenth century, Dr. Stewart's parents emigrated to the then wilderness of western New York, where in Penn Yan, Yates county, he was born July 5th, 1818.

Dr. Stewart fitted for college at Pittsfield, Massachusetts, and so had the training of a preparatory school, away from home. On one of his journeys to school, he was a passenger on the first railway train which ran from Albany to Schenectady—one of the first railways in the United States. Though his father died when he was but a lad, strenuous effort enabled young Stewart to graduate in 1838 from Hamilton College, New York, at the age of twenty. The following incident of his college life showed that "the boy was the father of the man." After he had successfully fulfilled all conditions for the degree of A. B. he accidentally

saw some boys commit a boyish prank. The Faculty insisted that he name the perpetrators, but he declined. For this his degree was withheld many years and his name omitted from the lists of Hamilton College Alumni. After he had won a distinguished place in the profession, the Faculty sent him a Master of Arts degree.

He began his medical studies in the office of Dr. Samuel Foote, of Jamestown, New York, took two courses of lectures at the College of Physicians and Surgeons of Western New York, and one at Geneva Medical College, receiving the degree of M. D. in 1841. After spending some time in post graduate work he settled in Detroit in November, 1842, at the urgent request of several married sisters living here. So slow did practice come to him, that he was often on the point of giving up the struggle and moving elsewhere—at one time to Rochester, New York, at another to Chicago and another to Monroe, Michigan. Finally, as he became quite discouraged, his close friend, the late William N. Carpenter, went to the Rev. George Duffield and told him that Detroit was likely to lose a finely educated physician, unless he was assisted to get patients. The case appealed to Dr. Duffield, and he took the matter up in such a way that paying pa-

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\*Read before the Wayne County Medical Society, November 5, 1906.

tients began to flock to Dr. Stewart's office and continued to do so until his death. His sensitive shyness made it quite impossible for him to push his way into practice. Dr. Stewart never learned of Mr. Carpenter's friendly act at this critical point in his career. Except a year spent in Europe for study and recuperation, he practiced medicine continuously until October 3d, 1906. On that day he said he felt weary and laid down, growing weaker and weaker till he became unconscious, whence on October 9th, he passed to the land whence no traveler has returned. Like the Deacon's "One Hoss Shay" he went to pieces all at once.

When Dr. Morse Stewart began practice in Detroit, the State of Michigan and its University were but five years old. Detroit's population was about ten thousand, eight thousand being French who lived by farming, hunting, fishing and collecting furs. The rest were army people and their families with mechanics needed for such a population. To these must be added a motley swarm of land lookers, numbers of the suddenly rich, boomers, speculators, sharpers, merchants, lawyers and doctors.

Detroit was without sewers, pavements, street lighting, indifferent water supply—a veritable mudhole in rainy weather.

By decision of the Supreme Court, any person could become a doctor by assuming the title. As may be inferred from

the character of the population, the fees of the doctors were meager, if any, and often had to be taken in "store pay," which meant a discount of twenty-five or more per cent from cash. Since money was scarce, manufacturers and merchants had an agreement, by which they paid their employees, in orders on each other. A doctor collecting a bill from one of these, was often compelled to accept store orders. The practice of medicine was quite unsatisfactory both from the ignorance of the people on ventilation, pure water, healthful food, etc., and the absence of those aids which characterize modern practice, as physical diagnosis, pathology and pathological anatomy, physiological chemistry, bacteriology, etc., the coal tar products and active principles of crude drugs, the ophthalmoscope with allied scopes, the clinical thermometer, and other instruments of precision, anesthetics, antiseptics, serums, etc. In 1842, the doctor's tools were mainly venesection, emetics, cathartics, diaphoretics, mercury, quinine, opium, hot and cold water, fresh air and good food. That he did so well, called for large brain capacity, accurate quick observation, sound judgment and prompt action. A knowledge of the cause and treatment of scabies was then unknown, so that when in the late forties, Dr. Herman Kiefer brought it to Detroit, both puzzled physicians and scratching people welcomed the relief. Owing to their very intimate physical relations almost every inhabitant was infected with what was called the "Michigan Disease." To have been the means of removing this incubus, sufficed to start Dr. Kiefer well on the way to both renown and large fortune. With the practical application of the dis-

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Note—The facts related in this paper were collected from:

- (1) Personal interviews with Dr. Stewart.
- (2) Interviews with members of Dr. Stewart's family; with older members of the profession now dead, notably Dr. George B. Russell, Dr. Peter Klein, Dr. N. B. Stebbins, Dr. George P. Andrews and others; with Dr. Herman Kiefer, etc.
- (3) Records in the Medical Journals and Medical Society Reports.
- (4) Unpublished manuscripts of Dr. Stewart.



coveries and inventions which transformed Detroit from a measly little village to the peerless metropolis of today, and the practice of medicine from a series of guesses to accurate knowledge based on demonstrated facts, Dr. Stewart kept such close touch, that at the close of sixty-four years his actual practice was wholly modern.

It is worthy of note in connection with these changes, that in 1842, the date of Dr. Stewart's settling in Detroit, there was established the first absolutely public free school system in the world, and especially noteworthy that Drs. Douglas Houghton and Zana Pitcher, with Samuel Barstow, were the active agents in securing it. This system was in accord with the famous declaration of Congress in 1787 in connection with the Northwest Territory—viz. "Religion, morality and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall forever be encouraged." This spirit working through our free school system transformed the people of Michigan of 1842 into the people of 1906. It wrought partly by attracting superior people and partly by educating those already here. It will be noted that the securing of these free schools was largely the work of physicians. In like manner Michigan University owes much to Dr. Zana Pitcher, Abram Sager, Douglas Houghton, Edmund Andrews, and many others, among whom was Dr. Stewart. Time forbids proof of the proposition, that the medical profession of Michigan has been a very large factor in the building of the State—outside of caring for the sick. Educated, clean, strong physicians like Dr. Stewart have ever

exercised large influence upon currents of state life and invariably for their betterment.

In 1852 Dr. Stewart married Miss Isabella Duffield, daughter of the late Dr. George Duffield, also a descendant of a Scotchman from the north of Ireland who settled in Lancaster, Pennsylvania. She died in 1888; three sons and two daughters survive these parents—viz., Dr. Morse Stewart Jr., Dr. Duffield Stewart, Mr. Robert Stewart, Mrs. Charles B. Lothrop and Miss Mary Stewart.

To promote the interests of the charitable institutions of Detroit was one of the great pleasures of Dr. and Mrs. Stewart. How much the Orphan Asylum, The Home of the Friendless, and the Thompson Home for Old Ladies owe this couple, the public will never know. Without them Harper Hospital would never have existed. Briefly the story of its inception is as follows: One day as Mrs. Stewart was calling on her father, he remarked that a parishioner of his—Mr. Harper—had decided to endow the First Presbyterian Church with his entire estate. This was reported to Dr. Stewart, who at once exclaimed, "the First Presbyterian Church needs no endowment, but the Detroit sick poor need a free hospital." Mrs. Stewart carried this opinion to Dr. Duffield, who persuaded Mr. Harper to leave his estate to found a Free Hospital. It was a matter of regret to both Dr. and Mrs. Stewart that the hospital could not have been entirely free to the sick poor as was the mind of the donor and his advisors.

The present generation of physicians has rarely seen Dr. Morse Stewart in medical society meetings, because deafness prevented his hearing the reading of

papers or their discussion. His last paper was read before the Wayne County Medical Society, in conjunction with papers from the late Dr. Geo. B. Russell, and Dr. Herman Kiefer—all relating to personal recollections of their past medical careers. That paper showed large mental vigor and a philosophical dealing with facts in whose enactment he was an active participant.

Immediately after his arrival in Detroit we find Dr. Stewart a member of the Michigan Medical Society and the Wayne County Branch when organized. He was a member of the first purely local society organized in Wayne County—the Sydenham Medical Society.

On its dissolution he aided in organizing the Detroit Medical Society in 1853 and was its first president. During the six years of its life Dr. Stewart contributed many papers and discussions, some of which the writer was able to read, through the courtesy of their author, as he never published them. They exhibit a ready command of forceful English, close observation, logical reasoning and tireless devotion to his profession. To illustrate some of these characteristics I quote verbatim a few sentences from the close of one of his addresses to the graduating medical class at Ann Arbor:

"The truth is that the better instincts of our nature always bring us, when yielding to them, into such sympathy with suffering, as only a high valuation of human life will avail to explain, and this way sympathy hath its compensations in its reflex influence, developing the purer and better qualities of our nature. For it is a wise provision that the more favored class in all communities should feel impelled by their sympathies to care for their less favored fellows. Does not the office of ministering angel in smoothing pain tend to the cultivation and development of the æsthetic and moral nature of man?"

"To you, my young friends, this subject especially addresses itself. Introduced as you are this day, into the fellowship of physicians, the dignity and honor, which this association brings, implies also a consecration of yourselves and all your powers, to the one subject of your calling.

"If you come to the discharge of their high and responsible duties with a due appreciation of them and a proper estimate of the importance of the great work you have undertaken, then be assured of a great success awaiting you. In the attainment of this end yours will be no idle hands, and your brains no indolent, listless workers. Your rounds with your patients will be but a small part of what you shall find to do and will do, for thought and study will be your constant occupation. It cannot be otherwise, if you enter earnestly and properly upon your calling."

"A word of admonition and I have done. You have made choice of a noble profession. There is before you a sphere of great usefulness. Henceforth your business is to save human life. If your vocation is to be as tireless and exacting as I have represented, you will need in order to gain the fullest success, to begin with a systematic ordering and managing of your work. Much is lost in every industry through want of system. Let not this be your mistake. Remember that to do anything you undertake well, it should be done thoroughly. Do not be in haste to complete the matter essayed by slurring over and neglecting details. Do anything and every part of the thing attempted in its place and in its order. Have no spare time and do not waste opportunities. With plans all made so as to use any moment, be ready when one thing is disposed of, promptly to apply yourself to its successor. It is wonderful what an accumulation of work will in process of years come of this careful husbanding of the small fractions of time."

In his first paper before the Detroit Medical Society he discussed "Our Relations and Responsibilities," and though written more than half a century ago its propositions hold now almost as then. In May, 1854, he read a paper on "The Value of a Knowledge of Medical History to the Modern Physician." All then claimed for medical history as of exceeding value to the physician, has even greater force today. During the same

year he read a paper on "Acute Rheumatism" which shows how little actual progress has been made since that far-off day. The Detroit Medical Society had a custom of appointing committees to report on certain resolutions given them. In accord with this at a stated meeting Dr. Stewart, on behalf of a committee composed of himself, Dr. Richard Inglis, and David Henderson, reported on the following: "Resolved, That it is the duty of our profession to investigate the merits of all medicines that promise any hope of usefulness in the treatment of disease, without regard to the source through which remedies come before the public." Unanimously the Committee supported the resolution, and Dr. Stewart gave the reasons therefor. On March 29th, 1855, Dr. Stewart gave the valedictory address to the graduating class, Department of Medicine and Surgery, Michigan University, Ann Arbor. For graceful diction, profound analysis of the ideals which should mould the young physician, and persuasive phrase, this address easily takes its place with the best of its class.

Later before the same society he discussed the question "Is the entire separation of the placenta in placenta previa as recommended by Sir James Y. Simpson, of Edinburgh, a justifiable practice in the majority of cases?" To the exuberant discussion on the removal of the Medical Department of the University of Michigan to Detroit, Dr. Stewart contributed one of the most thoughtful and temperate articles. After more than half a century the question is still unsolved and bids fair to furnish material for discussion an hundred years hence.

On July 12th, 1855, Dr. Stewart read a paper on "Is Scrofula a Temperament in

which Inflammatory Action Develops Certain Morbid Forms or is it a Disease?" The profession is still asking, what is scrofula?

In 1856 Dr. Stewart read a paper on "Diphtherite — its Clinical History, Causes and Treatment." To those whose observations are limited to the treatment of diphtheria by serum this paper will seem a horrible dream, but it was only too real to the physicians and people of that far-off day. These are but samples of Dr. Stewart's unpublished papers and are mentioned to show that at one time he was an active worker in medical societies and for other general professional interests, and to indicate the topics which found favor with his cotemporaries. They awaken a regret that the same scholarly habit, the same power of forceful writing could not have been continued to our time. On a few occasions the writer listened to Dr. Stewart discuss medical topics in medical societies, always with regret that such marked capabilities had been crippled by aural disease.

A visitor to his office, from the beginning to the end of his sixty-four years of practice, would find his leisure moments occupied in studying the latest medical journals and books so that he was able to discuss recent views of practice.

During Dr. Stewart's career many epidemics swept through Detroit. Thus during the summer of 1849 Asiatic cholera raged three months. During July there were three hundred and fifty deaths in a population of less than twenty thousand. Another outbreak of the same disease occurred in 1854 lasting three months, but was milder in type.

In the spring of 1850, a severe epidemic



of cerebro-spinal meningitis broke out, attacking chiefly children, rapid in course and extremely fatal. As there had been no reports of similar epidemics elsewhere, the physicians were bewildered as to its proper management. In a milder form the disease continued for many years, and even now a sporadic case occasionally appears. Dr. Stewart chanced to see the first case and described it thus: "One morning I was summoned hastily to see an old family and found a little boy dying from symptoms I had never before seen. I reproached the mother for not sending for me earlier as it seemed the boy must have been sick for days. But she assured me he had been playing on the floor quite well an half hour before. As nothing remained to be done I returned to my office only to be recalled with the statement that the little sister had become very sick. With all possible haste I accompanied the messenger only to find the little girl dying, and I realized that a new disease had entered Detroit."

About 1850 the first cases of diphtheria appeared and were horribly malignant. The helplessness of attending physicians is evident to all who consider that they were without serum.

During earlier years malignant malaria was endemic, so that healthy persons died in the second or third paroxysm. Not infrequent were epidemics of smallpox, scarlet fever, measles, etc., of greater or less severity. Before ice was generally used to preserve food, especially milk, and boiling water to cleanse the vessels, the infant mortality was frightful during the hot months, especially in the western portion of the city—a region then most infected with cerebro-spinal meningitis. Dr. Stewart's sensitive nature was much

distressed at the suffering and death of the multitudes of babes, and he did what he could, to inaugurate the measures which stopped these yearly holocausts. Now cholera infantum is practically a thing of the past, cleanliness, proper food, better air and good sense did the work.

In caring for the victims of these epidemics, Dr. Morse Stewart was never known to shirk any obligation or hesitate a moment in exposing himself to the worst infection. He was tireless in service to his patients, whether rich or poor, even to exhaustion. In common with fellow doctors, he incessantly taught the means of preventing these diseases, viz., proper drainage in sewerage, pure water, correct plumbing, adequate ventilation, cleanliness in the home, place of business, public buildings — cleanliness everywhere, at all times and under all circumstances. By reducing such teaching to practice Detroit has gained a deserved reputation for healthfulness during the entire year.

Religiously, Dr. Stewart was a Presbyterian—a Puritan flavor being added to the original Scotch-Irish article by long residence of his ancestors with the Connecticut Yankees. He was never disturbed by the onslaught of the higher criticism, but read his Bible, studied the questions involved, associated himself with those of his faith, and was ever ready to give a reason for such faith.

Politically, Dr. Stewart was a Democrat of the Jeffersonian type, but he gave other gentlemen the same liberty of opinion which he claimed for himself. The only political office he ever held was that of member of the Detroit Board of Health from 1880 until 1886, under the late Mayor Thompson. In such position he

was instrumental in securing for Detroit as Health Officer the late Dr. Wight, who did so much in laying correct foundations for future developments of the service.

Medically, Dr. Stewart disliked all "isms" and "pathies" especially homeopathy, but no tribute to his memory was more hearty than one from a leading homeopathic physician, reciting the occasions when Dr. Stewart spontaneously expressed warm sympathy with his bereavement and misfortunes—thus he showed himself larger than his religious, political or medical creeds.

He was never a hospital physician, or a medical college professor, or a post graduate instructor, or the editor of a medical journal. In his earlier days such institutions did not exist and when they came to Michigan he was fully occupied in his own professional duties.

Personally, Dr. Stewart was clean in thought, word and deed—a purifying element in social, civic and professional life. He looked and bore the manner of the old time gentleman, that he was. His word was equal to his bond—as when during war times the city profession decided to raise its face, he kept the spirit and letter of the compact, while others forgot.

While genial with his friends, he never sought social position and accepted that which fell to his lot with unusual modesty. It was foreign to his nature to seek preferment by emulating the "good fellow" or cultivation of clubs or other festive places. Of extreme nervous temperament, he was sensitively shy, too much so for his comfort. Generally this powerful engine was kept under perfect

control, but occasionally it broke loose to the dismay of offenders.

Dr. Stewart loved a fine horse and in his prime drove the best obtainable and drove fast. On one occasion as consultants were waiting the preparation of their patient, the question arose as to what each would do for a living should he fail in practice? Dr. Zana Pitcher said that Dr. Herman Kiefer would start a brewery, Dr. N. D. Stebbins become a Presbyterian preacher, Dr. Stewart run a stock farm for fast horses and himself become an Episcopal bishop.

Illustrating his happy relations with Dr. Pitcher, Dr. Stewart related the following: "At the beginning of his practice he was greatly worried from lack of confidence in his treatment. Often he would visit a patient several times daily, changing the medicine each time. Finally becoming quite sick from the strain, he consulted Dr. Pitcher, who gravely listened to his story and then said, "You made the best possible preparation for your work, you study your cases with care and use your best judgment in prescribing. Now keep away from your patients long enough for your prescription to do its work." At once an unbearable burden fell from his shoulders and thenceforth he had reasonable confidence in his own work.

What of the financial side of Dr. Stewart's life? He actually practiced continuously about sixty-three years. His clients included all classes, but more than most physicians, they were of those able to pay for service. He maintained the rate of fees formulated by the old Wayne County Medical Society, and collected with unusual exactness. He lived well, contributed to the support of many



charitable institutions, to the needy poor, to unfortunate relatives. He had no expensive habits. His dress, professional equipment and home were models of neatness and good taste, but there was no waste anywhere. From all these years of work the net result did not exceed fifty thousand dollars—this apart from inheritances of Mrs. Stewart and himself.

Dr. Stewart had his full share of trials and misfortune, but with mien erect and step firm, he trod life's pathway, sustained and soothed by an unfaltering trust, and on approaching its end, wrapped the drapery of his couch about him and lay down to pleasant dreams.

Finally we have seen that he inherited a large capacity for industry, thrift, honesty and fear of God, and a body of

exceptional endurance. He acquired a full literary training, a medical education of unusual thoroughness for his time, a sympathetic talented wife, and close association with the best physicians, and educated laymen.

He was crippled by deafness early in his career, and a temperament hard to control.

Those most conversant with the facts agree that for sixty-four years Dr. Morse Stewart ranked with the leading citizens of Detroit and its best general practitioners, that his career exhibited those characteristics which make for a medical profession that shall be the corner stone of a republic of intelligent, broad-minded, liberty-loving, God-fearing people.

**The Histology of Linear Naevus.**—The microscopic examination of linear naevi has shown that they have not always the same histologic structure. In some few instances the naevus has been composed of masses of one or other of the skin organs—e. g. Hallopeau's linear naevus made up of agglomerated hair follicles and sebaceous glands, Petersen's case, and Elliot's case of sweat-gland naevus, and Judassohn's case in which were found masses of sebaceous glands. In one of Unna's cases there was an inflammatory condition resembling that of chronic eczema. In the large majority of cases examined, however, the growth has been of the *hard naevus* type, that is to say a localized ichthyosiform condition—acanthosis and hyperkeratosis—with more or less cell-infiltration and vessel-dilatation in the dermis. These conditions are entirely opposed to those obtaining in *soft naevi* or *moles*, and they are in no way explained by the theory of cell-inclusion of Cohnheim which so nicely fits the most generally held view as to the epithelial structure of the soft moles. There is some difference of opinion as to the meaning of the "inflammatory" changes so often found in the corium in sections of linear naevi. Jadassohn believes that there is always a slight degree of latent inflammation present, and

in the after-treatment of synechiae and in post that the least irritation suffices to produce a manifest and lymphatic dilatation, which by augmenting nutrition leads to all the other changes of cell-proliferation, papillary hypertrophy, acanthosis, and hyperkeratosis. Others regard the changes in the corium as of a "secondary" nature.—ADAMSON (*The British Journal of Dermatology*, July, 1906.)

A padded triangular wooden or cardboard splint—one leg of the triangle bandaged to the thigh, and another to the trunk—makes an excellent ambulatory apparatus in the treatment of fractures of the shaft of the femur in small children. It maintains reduction, leaves the leg free and does not interfere with keeping the child clean. Cardboard splints can be best molded to an extremity by tearing, instead of cutting them.

Gauze is preferable to cotton for padding the axilla or breasts in dressings that are not frequently renewed. Cotton easily becomes matted with sour-smelling secretions and thus sets up dermatitis. The skin over the tendon Achilles and about the heel cannot be too carefully padded, when applying Buck's extension apparatus.



## REPAIR OF THE PERINEUM\*

Objects to be Attained—Review of Some Methods Now in Use—Advantages of the Somers Operation.

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W. H. HAUGHEY, M. D.  
Battle Creek.

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While the title of my paper might seem to secure for it a position in "Thrice Told Tales," still the fact that many and most of the methods now in use fail to properly or satisfactorily correct this deplorable and oft-occurring obstetrical lesion, proves that the time has not yet arrived when papers which stimulate thought and encourage study for the relief of this distressing accident need any apology for their appearance.

Obviously any operation that seeks to correct a lacerated perineum, unless its technic includes an effort to restore the normal anatomical relations of the torn and separated muscles cannot accomplish its object, viz., normal function of the perineum, because the normal function depends upon muscular action and not upon mere bulk. The principal perineal muscle is the levator-ani, which surrounds both rectum and vagina, and its functions are not only to hold the lower end of the rectum up and elevate it during defecation, but also to compress the walls of the vagina and hold them together, thus materially helping to prevent either prolapsus of the uterus, rectocele or cystocele. Of somewhat less

importance, but still in no small measure supporting the levator-ani, are the transversus perinei muscles which cross the pelvic floor at right angles and external to the levator-ani, thus tending to fix the central tendon of the perineum in its position. The central tendon occupies a position somewhat analogous to that occupied by the keystone of an arch, with this difference, *the keystone receives the force* from nearly all directions as pressure is applied to it by the arch itself, this force of course varies in degree depending upon the amount of strain placed upon the arch, while the central tendon *resists the force* from nearly all directions as *tension* is applied to it by the perineal muscles attached; tension likewise of a varying degree depending upon the amount and strength of contraction or relaxation of the perineal muscles. The perineum then is a suspension bridge sustaining a tension, not an arch bridge resisting a pressure; it supports a luggage, it does not bear a burden.

The sustaining or supporting power of the perineum, together with its rising and lowering motion, is secured by the contraction and relaxation of its peculiarly arranged muscles, which, radiating from a common center, the central ten-

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\*Read before the Section on Obstetrics and Gynecology at the Jackson meeting of the Michigan State Medical Society, May 23-25, 1906.

don, and attached to fixed peripheral points, the pubes, coccyx, ischi, and their tendinous inter-connections can only, by their contraction, result in the elevation of the entire structure; and a corresponding relaxation of the muscles must result in a corresponding lowering or depression from its own or any superimposed weight. As both ends of a muscle must be attached to secure contraction, therefore a laceration of the perineum occurring as it does at or near the center of the above described mechanism, the central tendon, if severe enough to involve the levator-ani, also the transversus perinei muscles by destroying their attachment and separating them from their fellows of the opposite side, then their further contraction will be impossible and thus the lifting up of the perineum will cease. The levator-ani will no longer coaptate the vaginal walls and prolapsus of the uterus, rectum, or bladder, either or all, as the laceration is more or less severe and complete, will occur.

Obviously the desired end of the operation for restoring this ruptured perineum is not merely to restore its appearance, but primarily to restore its functions. To do this, the individual function of each muscle must be restored and this can only be accomplished by again attaching the loosened end of the muscle to its original, or as nearly as possible its original, anchorage or attachment. Merely to denude large surfaces and sew them together in a hap-hazard fashion will not accomplish this result, because the ends of the muscles have not been approximated; the firm, strong, non-relaxing, tendinous attachment has not been restored; the loosened ends are still

lost in open cellular tissue or entangled in a scar mass which soon stretches and offers no, or but slight, resistance to strain applied by muscular contraction. Again these muscles will have become shortened, apparent shortening at central ends, because as soon as torn loose retraction will occur, by muscular action. The untorn, fixed, or peripheral end remaining stationary, all the displacement will occur at the central or detached end, which is at once retracted more or less deeply into the surrounding soft tissue.

If, then, this soft tissue is contracted together and sewed into a mass, muscular ends not approximated, when healing is complete there being no muscular fibers running through it, it will simply be a more or less globular mass of scar tissue to which, completely surrounding it equatorially, is attached a row of muscles whose action places upon it a degree of tension that its structure is unable to withstand. If one of these patients is examined six months or a year after the operation, instead of a strong perineal body composed of normal acting muscle, will be found a thin floor of scar tissue relaxed, distensible, non-resisting, and poorly adapted to perform the duties required of the normal muscular perineal body. In other words we will have a perineal floor with a border of weakened muscle and a center of distensible and stretching scar.

The Emmet operation with the inverted "W" denudation, leaves a thin strip of scar or pathological tissue in the median line which would, if the levator-ani fibers were sewn to it, serve to keep them apart rather than join them together, and from its distensible nature, would fail to prove the firm, strong an-



chorage necessary. For these reasons, and because the muscles are not united, the operation has not been the success it should have been.

In few of the other denuding operations are any efforts made to approximate the muscles and they are therefore open to the same objection. Dudley passes a number of buried sutures through the fibers of the separated central tendon.

The Tait flap operation, by preserving the flap, makes a larger and more bulky perineum, but it is of scar tissue, and his method of suturing does not approximate the muscles.

Among the many modifications of Tait's operation are Edebohl's, Simpson's, Fritsch's, Duke's; but these mostly consist in slight differences in forming flaps or inserting sutures, no effort in any of them being made to approximate muscles. Kellogg, of Battle Creek, has also modified Tait's operation by cutting off a triangular or "V" shaped portion of the flap. He uses loop sutures, introducing them beneath the skin and tying between its edges at the median line, muscles not being approximated. A perineal body of scar is thus formed which will and does become relaxed and thin. Kellogg has recently improved his methods.

Reed searches for the muscles and tries to approximate them; he passes two sutures through each edge of the levator-ani and draws them together in the median line, sewing the flap down over the united muscle. This operation and Dudley's are two of the very few that make any effort to restore the separated muscles and both have a claim to scientific considerations. Reed uses figure-of-eight sutures introducing them beneath

the skin, sweeps around a large mass and brings ends out a little distance from the median line opposite point of egress, tying the ends he thus completes the 8. This method of *tying* is objectionable because when the parts swell the non-elastic suture cuts through the skin, making deep ulcerating sores, which not only annoy greatly, but become easily infected, must granulate, thus increasing the amount of scar in the newly-formed perineal body. A better way to fasten this suture would be to pass the ends through rubber tubing and secure by compressing on each a perforated shot, if the rubber and shot are not pressed down too close and a little room is left to allow for swelling there will be less cutting of skin and the operation will be greatly improved.

By far the most complete and scientific of any operation for repair of the perineum that has as yet come under my observation is that of Somers of San Francisco, a description of which he read before the Section of Obstetrics and Diseases of Women of the American Medical Association, July, 1905, at Portland, and which later appeared, beautifully illustrated, and with full discussion in the *Journal of the American Medical Association*, November 11, 1905, pages 1462-1468.

Somers first locates the edges of the levator-ani on either side by examining with a finger in the vagina, he then makes a triangular denudation and removes the triangular shaped section of mucosa therefrom; the muscles are now again felt for and when located drawn out from the surrounding tissue by volsellum or tenaculum forceps. Now beginning near the apex of the triangular denudation, a suture of silk worm is introduced with



mattress stitch from side to side in the deepest portion of the wound. In passing the levator-ani muscles, which are still held by the vosella it passes through the edges of each two or three times, it then continues through the deep portion of the wound taking the tissue over the denuded perineal muscles, it finally emerges through the skin just above the lower angle of the wound and is drawn taut; this approximates the tissue and muscle. A second and third are passed in similar manner, each taking in a portion of the levator-ani, and each drawn taut as soon as passed, so that the next when inserted at the bottom of the wound will lie just above its predecessor. As each is drawn taut the denuded surfaces are drawn together and the perineal body is built up from the bottom of the wound and restored in the natural, or reverse order of which the laceration occurred. The last suture will be submucous and simply serves for a final closing of the wound.

A most important feature of the suturing is the method of fastening the ends. After making certain that all the sutures are drawn taut by testing each separately the vaginal ends are all gathered into a single shot and clamped from half an inch

to an inch away from the surface, then the perineal ends are fastened in exactly the same manner. This method of fastening allows for swelling. The sutures will hold the parts in position and if any swelling occurs the tissue will slide along the free ends towards the shot, taking up slack without cutting into the skin, and the surfaces are still kept in contact.

To remove the sutures cut off the vaginal ends, close up to the membrane, grasp the perineal ends with forceps and draw; sometimes the one first inserted will come hard but gentle traction will soon bring it.

This method of suturing builds the perineum up layer by layer, approximates the muscles and surfaces without undue tension or constriction of the circulation and leaves the tissues in the best possible condition for immediate union.

I have done this operation on several patients with most gratifying results, not only has the symmetry been restored, but prolapsus, rectocele and cystocele have been corrected, and a perineal body, muscular and capable of normal contractions, secured.

Where the sphincter ani muscle is torn, of course *other and appropriate* measures for its restoration are required.

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The important consideration in the treatment of fractures are, at first, relief of pain and reduction of swelling, and, subsequently, preservation of function of the muscles, the nerves and the neighboring joints. Thus there have come into modern methods a recognition of the value of early and frequent massage and passive motion (and in suitable cases, of *active* motion) and of the necessity for avoiding splints that unduly compress the muscles or deprive them of activity.

The X-rays have taught us that mathematical reduction is rarely, and evenly linear reduction is seldom, accomplished even in cases in which excellent functional results are secured. Radiographs have thus frequently been made the basis of blackmailing damage suits. Nevertheless the X-rays are, of course, of immense value in the treatment of fractures—not only for reference before and after reduction, but during the reduction itself.

## THE TREATMENT OF NERVOUS DISEASES\*

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W. J. KAY, M. D.  
Lapeer.

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During the last ten years the treatment of nervous conditions by the general practitioner has improved greatly. We know very little more of the structure and very little more of the pathology of nervous diseases (as indeed we cannot until the structure has been demonstrated), yet, withal, we have advanced in treatment. There has been a growing sentiment in the profession to view the patient as a man with a mind, and a mind that can become diseased, so far as we can demonstrate, without the physical counterpart, and I may go still farther and say that this mind must be treated, to get the best results, by other means than drugs. You may think this sounds like Eddyism or Christian Science. On the other hand, did you ever think, that that science, or cult, must fit in somewhere; it must meet the needs of diseased humanity in some particular, or there would have never been the growth, financially and numerically, that it has enjoyed. It is a cheap John counterfeit of a therapeutic measure that every physician should use intelligently. If you will look into it you will find that it is the replacing in the unstable mind the idea of disease with that of health. A splendid therapeutic measure for many of the neurotics who come to us for relief. If Eddyism does

no other good in the world, it has forced the regular profession, in its rank and file, to take notice of the functional nervous diseases and mental diseases and the role the mind plays in certain disease pictures that are common in our every-day work.

The organic diseases of the nervous system, such as sclerosis, tumors, etc., are accompanied by symptoms sufficiently plain to indicate the location and character of the same and the pathology is largely that of simple inflammation, acute, subacute or chronic, and its results. The treatment we have at our disposal is very similar to the treatment of inflammation of any other part of the body. The hardening of tissue in a sclerosis must presuppose a congestion of the part to begin with. Now if we could recognize it early and depress the circulation, much good would come of it and we would lessen the damage, or when the stage of congestion is past and as a result of increased circulation, we have new growth, and we wish to promote absorption, it is treated the same as a similar condition in the muscular system.

A friend jocularly remarked to me that in treating nervous diseases, we give some patients strychnine, the rest get bromides. The nervous system is diseased. What does it need, stimulation or

\*Read before the Lapeer County Medical Society, October 10, 1906.

depression? If we keep in mind the pathology of the disease at the particular time we are furnishing the medication, we will not make the mistake of giving a stimulant to a cord that is already being damaged by an excess of blood, or of giving a sedative to a nerve that needs a little bit of a whip to help it over the hill and start it functioning normally again.

Functional nervous diseases are not so exact in their pathology or in their treatment. Neurasthenia and hysteria are viewed very differently by able neurologists and psychologists. By some they are considered mental states, and that the defective nutrition and physical evidences of the disease are dependent upon the mind, rather than that the diseased functioning of the mind is dependent upon the diseased physical condition.

It is in the functional nervous diseases, and milder forms of mental diseases, where the general practitioner can do much good. The exaggerated mental disease is best treated in the institution. There is one class of patients that comes to mind now, that is, the patients with the "sick habit." They have fixed ideas of disease that have no foundation in fact; the bane of every doctor's life, they go the rounds. Each doctor, in his turn, is lauded to the sky only to be decryed and discredited. How often it will happen that you will carefully examine a person who has made a fairly good case in describing her disease and find absolutely nothing wrong. The stomach, the heart, the bowels and the kidneys measure up to the standard, as you examine them, and yet your patient complains of each organ being wrong. Have you never asked a patient if her bowels were regular and been told yes, and in less than a minute have her

tell you that "they move ten or twelve times a day, or have heard one say that she 'cannot sleep a wink,' and if you question her properly, find out that she sleeps at least five or six hours each night?" Such patients are not lying to you. No matter what they say, it is the truth as they see it, but their perspective is distorted and their idea of the relation of things as time, sensation, etc., is perverted.

Now, I think in this class would come a majority of the nervous people we are called upon to treat and here is where prudence and tact count. For the patients who are bound not to sleep, nothing is better in my experience than Bromide of soda. Give large doses. Make them sleep at first more than they want to. It makes a good impression on the patient. They see you have the situation under control. Gain their confidence. Take time to explain to them some of the things that worry them. I have gained the confidence of a patient by explaining the beating in his ear as he lay on the pillow. Such a simple thing as the pulsation of the abdominal aorta will distress many of these patients, but you can show them how every one must of necessity have the same pulsation and they, being hypersensitive, feel it more plainly. The point I want to make is: have patience with them, as indeed you must with all nervous patients. You will soon be repaid with their confidence, then you are ready to help them. After perhaps two or three interviews, they will admit an improvement, somewhere, and there is your chance, fasten that improvement upon them. I have had them try to back away from it and have had them succeed too, but as a rule, you can make it stick and one thing after another will be dissipated in



a similar manner. Remember it is often a play of minds and that you must be alive to the situation every minute of your time in their presence, if you are going to succeed.

Another important thing in the treatment of all nervous conditions is to find out how much work the patients do. A great many are overtired; this is especially true of the farmer's wife. Limit their work as much as you can. Change their environment as much as you can. Prescribe their diet, with insistence of a good quantity of fats. Be firm in giving the directions. Insist on obedience and above all things, you must be an optimist, always hopeful, a prophet of good. Impress them with the fact that in your mind's eye, you can see the day when they will be fully restored to health. Send them from your office feeling that they are on their way to recovery. That is the next thing to a recovery, which will just so surely come if you can keep them along that line of thought.

Hydrotherapy and massage are neglected and useful agents to the general practitioner, but must be used with judgment. The hot bath in tabes is like a

match in a powder barrel, a very bad thing and entirely out of place, but a good hot bath at night to the sleepless, tired patient is good and many times much better than a hypnotic. Gentle massage has a calming effect. Passive exercise aids elimination which is always deficient in these patients. I have purposely said very little about the drug treatment. Tonics such as phosphoric acid and its modifications, arsenic, iron, etc., are all useful, if anemia is present. The acid also stimulates the appetite.

Drugs are very little needed and are secondary to every other feature in the management of the case. I have spoken more of suggestion, because I think we neglect it. I mean suggestion in its legitimate form and entirely devoid of quackery. Suggestion unsupported by fanciful tales of a "liver with spots on that must take time to clear up," or a "stomach in which a pharyngeal mirror reveals ulcers that must take time to heal," but rather the suggestion born of an optimistic, hopeful spirit, that you impart to them, of an earnest interest in them, of the improvement from better food, better environment and a better balance of work and play.

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If the zygomatic cells are thoroughly laid open, one frequent cause of persistent suppuration requiring secondary mastoid operation, may be avoided.

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Don't fail to make a digital rectal examination in cases of appendicitis and in all ailments when the diagnosis is obscure. Nor should it ever be omitted before an operation upon anal disorders. It may save the embarrassment of a subsequent discovery that a patient's hemorrhoids, for example, were but an expression of a carcinoma higher up in the rectum.

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In all examinations of children, and in the examination of adults for suspected fractures, leave the painful manipulations for the last.

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In very many cases it is not necessary to the diagnosis of fracture to elicit crepitus and abnormal mobility—often painful manipulations. In several forms of fracture there are other positive diagnostic evidence. Thus, with Colles' fracture the level of the styloid of the radius will almost always be found to have receded from beyond that of the styloid of the ulna. Moreover, X-ray examinations save much painful manipulation.

## ALARMING SECONDARY HEMORRHAGE, FOLLOWING THE REMOVAL OF THE PHARYNGEAL TONSIL. RECOVERY.

Report of a Case.

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V. A. CHAPMAN, M. D.

Muskegon.

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In the January number of *The Laryngoscope*, Homer Dupuy gave a very interesting dissertation upon the subject of "Post-operative and Secondary Hemorrhage, following the Removal of the Pharyngeal Tonsil" with a record of fatal and non-fatal cases.

This article was of passing interest to me at the time I read it in January, but became of very intense interest several months later, for the danger of such an operation was thoroughly driven in upon me by an experience in my own practice.

Chas. V.—aged 16 years, was brought to me by his father February 24, 1906. He gave a history of frequent attacks of tonsillitis for several years. For the last six or seven years, he had been unable to breathe through his nose at all at times, and never enough to supply him with necessary air for any length of time.

Right ear discharging; had been so off and on for years—frequent ear-aches; hearing considerably lessened in both. Patient anemic and with characteristic appearance of the mouth breather. Palatal arch high and narrow; intumescent rhinitis; tonsils cicatricial; diseased crypts; nasopharynx filled with old adenoids, covering over the orifices of Eustachian tubes. Posterior hypertrophy—somewhat resembling mulberry, of right lower turbinate.

I advised removal of the adenoid mass as the first step towards relief of the patient. Inquiry as to hemophilic tendency, elicited no such history. Patient had some years before had two teeth extracted—ordinary amount of bleeding.

Had end of finger cut off by accident two years ago. No more bleeding than ordinary.

I treated the patient's nasal cavities, nasopharynx and pharynx for several days with the usual cleansing sprays and then operated. The case was operated before the local medical society as a demonstration in a talk on adenoids which I gave. As the growths had every appearance of being fibrous in texture, the forceps were used, followed by the curet.

Ethyl chloride, general anesthesia, in sitting posture. Patient took anesthesia well and the operation was quickly performed. The bleeding was very profuse immediately, but soon ceased spontaneously, and after the patient had reclined for half an hour, he expressed his ability to walk home. The bleeding had ceased, and he was permitted to walk to his home several blocks. The father was cautioned as to liability of hemorrhage and was directed to let me hear from the patient the next morning. The following day passed with no word. In the evening, the father came to my office and said the boy was too weak to come. In response to my inquiry, he stated that the boy had bled considerably about half of the night and part of the day. The father had been away from home all day and could give no statement as to the amount of bleeding. I immediately hastened to patient and found him in bed, pale and weak. Hemorrhage had ceased a couple of hours before my arrival. Pulse was weak but not rapid.

I prescribed ergotin, 1/6 gr. every four hours and strychnine arsenate 1/67 gr. every four hours, alternately and enjoined rest and quiet.

March 14, the following day, there was no hemorrhage. I continued the same medicine with additional 1/10 gr. calomel every three hours, and gave directions for spraying throat and nasal cavi-



ties with a mild alkaline antiseptic.

March 16, no hemorrhage—general condition improving and feeling good, though a little weak.

March 17, in morning, the father telephoned that boy was all right. Father called at my office at 7 p. m. and said that the boy was all right. At 7:45 p. m. the father returned and stated that the patient was again bleeding from the nose and throat and had been since seven o'clock. I directed ergotin be administered and to notify me soon if hemorrhage did not cease.

At 10 p. m., I saw the patient. Every two or three minutes he would expectorate a large mass of dark clotted blood and some light red blood with it, which was more serum than blood. The blood and clots were of such appearance as to give me but little hope that a normal clot would form at bleeding points. The bleeding from the nose was slight as nostrils were quite filled with dried blood. The patient was weak, but said he felt good. The pulse was rapid and irregular. I began administration of ergotin, fluid extract rhatany, and powders of gallic acid, alternately and frequently repeated and enjoined complete quiet, not permitting the patient to talk.

I did not disturb the clots which had already formed, as I still hoped that enough blood, such as it was, might become entangled and thus stop the bleeding. At times, it would apparently cease for a half hour and the patient would drop to sleep. Then would again be expectorated a quantity of those unreliable appearing clots and the thin reddish yellow serum. At 3:15 a. m., I made preparations for packing the naso pharynx. But as that procedure had so often failed others in stopping the hemorrhage, I determined first to clear away all old clots and try another measure.

I accordingly added some adrenalin solution to the alkaline antiseptic which had been used in the hand atomizer, and with these sprayed nose and throat thoroughly and had patient clear out these cavities of all that he could that remained of clots of blood. When these parts were cleared, I applied sol. sub-sulphate of iron (Monsell's solution) thoroughly to all parts of naso pharynx by use of non-absorbing cotton on post-nasal applicator.

This procedure nearly strangled the patient and it was some moments before he could get his breath. He gasped that it would choke him. I had previously warned him that this medicine would be very "puckery." It was a severe dose; but hemorrhage stopped almost immediately and in course of an hour, the patient dropped to sleep.

He was carefully watched for hours, but no hemorrhage recurred.

In the morning the gallic acid and rhatany were continued as were also 1/6 gr. of ergotin with small doses of strychnine arsenate, every three hours. Instructions were given that patient should have plenty of milk and eggs and remain perfectly quiet and not talk.

March 18, at 11 a. m., patient weak but feeling comfortable. Nasal and nasopharyngeal cavities filled with hard black clots. Lips and conjunctiva very pale. Treatment continued.

March 19, at 8:45 a. m., no hemorrhage. Takes nourishment well. Directed to continue treatment; also small doses of podophyllin.

March 20, no hemorrhage. Treatment continued. Prescribed glycerinated extract red bone marrow, two drams every six hours.

March 21, has been spitting a little red blood. A few black clots and a couple teaspoonfuls of fresh blood in course of three hours. Same treatment continued.

March 22, no more hemorrhage. Very weak yet; sat up a few minutes, but felt very faint and was obliged to recline. Pulse intermittent and irregular. Treatment continued. Necessity of pushing nourishment in form of milk and eggs impressed upon parents, also some poached eggs and soft toast.

March 24, no more hemorrhage. Nasal passage and throat clear of obstruction. No crusts nor clots. Feels good; has good appearance. Sits up most of the day with but little exhaustion; pulse of good volume and more regular.

From this time on recovery was uneventful. The patient was kept upon strychnine arsenate and red bone marrow extract for some time. Then was given after meals, a Bland compound pill of the following formula: Bland mixture 5 grains, conosive sub. 1/80 grain; arsenous acid 1/50 grain; extract gentian 1/16 grain, capsicum 1/64 grain; podophyllin 1/10 grain; strychnine sulphate 1/60 grain; meade process. This he took for several weeks with intermissions. Today the boy is hale and strong and has a good color. He has a tremendous appetite and is working every day. Father says that boy was never before so well as now.

The blood count in this case was unfortunately neglected. It would be interesting to know just what it might have been at times before, during and after



treatment of the case. This patient has not a bleeder's history. The adenoid mass was old and fibrous and vessels probably did not contract well; yet, I believe that the poor quality of his blood was an important factor in the hemorrhage. His tissues were of low resisting power. Slight contusions of mucous membrane of the palate, caused the rapid appearance of blood blister at these points.

These naso-pharyngeal hemorrhages are unpleasant to say the least. The surgeon is almost overcome by a feeling of helplessness, as it is so very difficult to bring any measures for suppressing hemorrhage into use in this locality. The post nasal tampons are not as satisfactory as could be wished. The pressure exerted by post nasal tampons is upwards and forwards, and the desired directions for tampon pressure to stop the bleeding following adenectomy are upwards and backwards. Pressure would also necessarily, at times, have to be exerted against the lateral walls of the vault of the nasopharynx. Spraying with peroxid of hydrogen is sometimes very useful. Adrenalin alone is not to be depended upon, because of its secondary action in relaxing the blood vessels.

Application of solution of sub-sulphate of iron is *not* a good measure to adopt, although it served me well in this instance. It was several days before I was relieved of apprehension of trouble, on account of its well known liability to cause sloughing and reopening of the hemorrhage when applied to cut mucous membrane surfaces.

Some months later, I removed from

the right ear large polypoid masses which protruded through a perforation in the tympanic membrane. There was some hemorrhage following this, but blood clotted well and flow ceased spontaneously. This healed kindly and with subsequent treatment the discharge entirely ceased and perforation closed. Patient's hearing is greatly improved for both ears and he has had no more ear-ache. He breathes well through the nose and has had no more sore throat.

At the Illinois Charitable Eye and Ear Infirmary during my term as resident surgeon I witnessed and performed a large number of these operations, also since that time in my own private practice, and patients were permitted to go home almost immediately after the operation. Many of these cases were young children in whom secondary hemorrhage rarely occurs; but some were older children in much the same condition as the case above narrated. No trouble with secondary hemorrhage ever occurred in any of these cases which came under my observation, but I am now impressed with the danger of treating such cases so negligently, and am surprised that among so many there did not occur any instance of the sort above narrated. Long continued freedom from untoward results in a large number of these operations begets carelessness; but one such case as above creates considerable respect for the importance of this operation. Removal of the pharyngeal tonsils is *not* a simple operation devoid of danger, although generally so regarded and treated as such.

A CONTRIBUTION TO THE THERAPEUTICS OF THE SCOPOLAMIN—  
• MORPHIN ANESTHESIA MIXTURE.

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F. T. F. STEPHENSON, M. D.

Detroit.

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The patient was a telegraph operator, aged 42 years. His height was five feet, nine inches; figure rather emaciated; weight, 119 pounds. Complexion dark; temperament decidedly of the nervous type, and has been gradually growing more markedly into what he characterizes "nervous condition" for several years past. His occupation is of course a sedentary one, with long hours and much strain, for he is located in a large office in a large city, and the work is further complicated by the worries of a staff of constantly changing and often unreliable men under him.

The patient has never had any very severe sickness, except an aggravated constipation of years' standing, and says his bowels would never move if he did not take "a pill every night, and sometimes several of them." Habits good; never used alcoholics to excess; tobacco only moderately; no venereal history. Began to have what he called "rheumatism" about ten years ago. No family taint discernable, but patient is a heavy meat eater, to which he sometimes traces his trouble, though declining to abstain, on the ground that it is absolutely necessary, as otherwise he does not feel properly fed. He has been under treatment for his "rheumatism" for most of the

whole period (ten years), with little results, while the pains are getting worse from year to year.

Physical examination shows little of importance except the emaciation (long since chronic), and marked tenderness over most of the emerging nerve trunks. Most pain has been felt in the sciatic nerves, with occasional trouble in the head and arms. Trouble is worse late in the day, and during the night, and for the past few years he has often had to stop work before night on account of the severity of the pain.

He came under the observation of the writer several months ago, and after a full examination, it was considered that the trouble probably arose primarily from defective elimination, and the treatment was directed toward improvement along this line. Systematic treatment was instituted for the constipation, with results; the skin was given the stimulation needed to assist, and the only attention given to the objective symptoms (the pains) was to lessen them to a point endurable by the patient, by means of sodium salicylate, aspirin, and an occasional dose of phenacetin or acetanilid when absolutely required. Under this treatment satisfactory progress was made. A month ago the patient was placed on castor oil in

dram doses every four hours, for the alleged anti-neuralgic effect, with results which appear at this date not to be separable from those obtained by the previous treatment.

The patient attended a "political rally" and sat two hours in an unheated hall. He came home and had a chill. Next morning the pains were general, and they increased rapidly during the day, both in frequency and vigor. The writer was called in the evening, and found the patient crying with the pain, and giving evidence of a beginning coryza. The severity of the pains was so great that the family and patient demanded the most active measures to relieve the suffering. One-fourth of a grain of morphin was administered by hypodermic, and gelsemium and hyoscine hydrobromate were given by mouth, one minim of the former, and one five-hundredth of the latter, every two hours. The patient quieted down for two hours under this treatment, but was able to endure the recurring pain only until daylight, when relief was sought again. The temperature was now 102.3° and every large nerve trunk was aflame. The patient was delirious with pain. Two grains of calomel had been administered the previous night with no results, and the patient had supplemented that with several of his own "pills" after I left, for he had found that it always required massive doses to get a movement when his pains were bad, yet nothing resulted from the combined cathartics. Three grains more of the calomel were administered, followed by three-eighths

of morphin by the hypodermic method. Relief followed in about fifteen minutes, and the writer left, to be called again at twelve o'clock noon, with a demand for relief, more insistent than in the morning. The patient had not slept for over thirty hours, the general condition was worse, with pulse 120 and temperature 103.4°

A hypodermic composed of scopolamin (hyoscin hydrobromate) grs. 1/100, morphin sulphate grs. 1/4 and cactin, grs. 1/67 was administered. In a half hour the patient was in a motionless sleep, which continued for practically six hours, when he awakened, with some pain, which was not too severe to be endured. Temperature was now 100.1°, and head was clear, with no nausea or other unsatisfactory symptoms. The relief was so great, both to patient and family, that with a slowly increasing severity of the pains, it was felt justifiable to repeat the injection about ten o'clock p. m., to secure a night of rest for both patient and family. The night was practically a repetition of the afternoon, and the patient awakened about eight in the morning, feeling quite well and rested. An attack of vomiting for a few moments, followed a light breakfast, probably induced however as much by the administration of an effervescent salt *after*, instead of before the meal. The stomach contents were deeply bile stained, and after the sickness, the patient felt perfectly well, except for a few fugitive pains in the limbs. The bowels moved copiously. Routine treatment followed, with the patient back to his office in four days.



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### Editorial

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**The Fourth Disease.**—The question of the existence of this disease, known also as "Dukes' disease," "Dukes'-Filatow's Disease," and "rubeola scarlatinosa," as an independent clinical entity, seems still unsettled, and the number of reported clinical observations is surprisingly small considering both the lively interest aroused in England and America by Dukes' report, and the close resemblance of the disease to rubeola and to mild or "abortive" scarlet fever. The disease seems first to have been described by Filatow in 1885, under the name of "rubeola scarlatinosa," but general attention was not directed to it until Dukes, a physician of Rugby, published a paper in the *Lancet* in July, 1900, describing his observations on several small epidemics, going back as far as 1892, one of which, a school epidemic, was coincident with one of scarlet fever, so that he was fortunate enough several times to see scarlet fever following the "fourth disease" in the same child, and vice versa. He also saw the disease in children known to have had rubeola. His observations were soon confirmed by Weavers, who had been astonished to see what he had at first considered "recurrences" of scarlet fever in a large

proportion of his cases, during a recent epidemic of that disease. The publication of these facts aroused at once a very lively interest, especially in England, and a very keen discussion arose among epidemiologists as to whether or not these and other reported cases were to be considered as of a separate disease or as a typical manifestation of scarlet fever or rubeola. It was to have been expected, in view of the frequency of mild scarlet fever and of rubeola, that this discussion would continue, and that many diagnoses of "Dukes' disease" would be made; but the fact is that the volume of literature on the subject is small, and that it is difficult to ascertain what the general opinion on the subject is, as the question is wholly ignored by many writers of text books. On the whole, however, the opinion of the men best qualified to judge seems to be that such a disease probably exists, although more clinical reports are needed to establish it definitely. The latest report is that of Unruh in the *Archiv. fuer klinische Medicin*.

It is to be noted in this connection that rubeola had a similar struggle for recognition, and that there are still men of wide experience who refuse to admit that it is anything but a mild form of measles.

The descriptions of the fourth disease by various observers agree very closely in every respect except as regards the eruption. The incubation period is said to be 9 to 21 days, differentiating it at once from scarlet fever when this point can be determined. The prodromal stage is absent or little marked. The rash is often the first symptom noted. This appears, according to some, on the face

first, while others say the chest shows it earliest. It is agreed that it spreads rapidly over the trunk and extremities, the body often being covered in six hours. It is variously described as finely punctate, or as consisting of fine dots, singly or in patches, and with or without connecting erythema. By some it is said to be lighter and more pink than the scarlet fever rash; by others a deeper red. There is also a difference in observations as to whether the region of the mouth is free from eruption. An elevation of temperature accompanies the rash, usually very slight, even with intense eruption, but sometimes reaching 104 degrees. The cervical glands are swollen, but not so much nor so constantly as in rubeola. There is no angina, no strawberry tongue, and no coryza. The pulse is little accelerated. The symptoms subside rapidly, desquamation, usually fine, takes place, being completed in about 14 days, after which there is no further danger of communicating infection. Complications and sequelæ are not reported, excepting one or two very mild cases of nephritis.

It is readily seen from this brief description that the resemblance of the disease to mild scarlet fever is more close than to the ordinary type of rubeola—so close, indeed, that a single case could not be differentiated from scarlet fever, and that a diagnosis of Dukes' disease could only be justified in the presence of a distinct epidemic, in which the long incubation period, etc., were present in all cases, and in which children who had previously had scarlet fever or rubeola were not spared. It seems almost superfluous to say that second attacks of scarlet fever are too

common for the occurrence of one or two mild cases in children who have previously had it, to justify a diagnosis of Dukes' disease.

The writer believes that he has probably seen one slight school epidemic of Dukes' disease, in which he made the diagnosis of scarlet fever as being safer. In fact, it is probably well for the community at large that this disease has not yet gained a definite place, for the temptation would undoubtedly be great in many instances to diagnose the milder disease, and as much harm might well be done as has so often resulted from the confusion of mild variola with variella.

It is interesting to note how additions are constantly being made to the list of acute infections, and the knowledge that many things are readily communicable which a few years ago were not so regarded is of great importance to us; but the attempt to classify as a separate and harmless disease cases which have always been considered as belonging to one of the most justly dreaded of the exanthemata should be done only with the greatest care and by the most experienced and skilful observers.



**A vigorous campaign against the criminal use of the mails** has been initiated by the Postoffice Department. During the past year more than five hundred persons have been prosecuted and fully two hundred of the most flagrant violators have been convicted. In discussing the question, a recent contributor to *Ridgway's* paraphrases the philippic of Cicero against Catiline as follows:

"What fakir, what swindler, what charlatan, what medical quack or criminal practitioner, what financial gambler, what thief, what purveyor of worthless nostrums, what moral pervert, what propagandist of false religion, false science and erotic literature, what unscrupulous adventurer, what social vampire is there, save the murderer, the burglar and a few other honest criminals, who has not rushed in to use the beneficent privilege of the mails to promote his nefarious trade?"

These schemes, carried out through the use of the mails, may be divided into mining stock frauds, medical frauds, "work-at-home schemes," Mexican plantation frauds of the Col. Sellers type, racing-tip frauds, and occult science frauds.

Medical frauds are usually advertised in one of two ways: either the seeker after wealth is an eminent specialist anxious to uplift humanity gratis, or a specific drug, remedy or apparatus is advertised, sometimes free of charge or for sale at a nominal price.

The specialist, usually of the private disease type, is generally a legalized practitioner, who does business under a firm name, institute or sanitarium. Over one hundred such quacks have been denied the use of the mails in Boston, over fifty in New York and we understand that Detroit and other cities in Michigan are receiving attention. The field here is certainly large. Were it not unfair to discriminate, one might mention Goldberg, and Kennedy & Kergan, of Detroit, and the Yonkerman Consumption Cure, of Kalamazoo, as good mate-

rial on which the Postoffice Department might work.

Among the local specific remedy frauds, none is more apparent than the S. E. C. ring, so extensively advertised by the "uric acid tree," "by whose fruits ye shall know it." The trunk of the tree is labeled "uric acid," while the fruit of the wonderful giant is called everything from "sore feet" to "failing eyesight," from "sleeplessness" to "salt rheum." "Locomotor ataxia," "Bright's Disease" and "Paralysis" are pictured as overripe fruits of the "uric acid tree," which have fallen off and are decaying on the ground. This lesson in botany greets us regularly every Sunday morning, and, lest we forget, now and then of a week-day evening. A copy has been respectfully referred to the Postoffice Department.



**An insult to the profession** is a despicable letter which has recently been received by many of the physicians in Detroit and doubtless also throughout the state. It comes from a doctor in Utica, New York. If the English used were its only bad feature, it would be simply amusing. Two paragraphs are enough:

"Doubtless you are aware of the many vicious and harmful effects of putrefaction in the human alimentary canal. How it gives rise to the formation of the deadly Ptomaine poisons, and that equally deadly poison, Indican, the presence of which in the human body not only induces arterio-sclerosis and atrophy of the tissues, but is accredited as



the most powerful agent by which time preys on *we* mortals."

"Could you use in your practice a remedy *guaranteed* to absolutely prevent intestinal putrefaction? Ow-ing to its perishable nature, it can-not be produced in bulk and kept in stock, but can readily be produced by any physician who has my form-ula."

Enclosed is the pledge card:

"Enclosed find \$5.00 for which please send me your complete work-ing directions for eliminating putre-faction in the intestinal tract in ac-cordance with proposition contained in your letter of November 5th. inst. On my professional honor, I agree not to divulge the same to any per-son or persons, without first collect-ing and remitting to you a fee of five dollars each, and placing them under similar restrictions.

Very truly,

.....  
.....

NOTE—The present price of \$5, being introductory, is subject to ad-vance after November 20th, 1906."

It is needless to remark that the "pro-fessional honor" of anyone who enters upon such a scheme is so far below par that in a short time this valuable remedy will become common knowledge.



The McCormack meetings held throughout the state last month were most successful. With two or three ex-ceptions, the attendance was good; in most places the lay audiences were rep-

resentative; everywhere the enthusiasm was marked.

In planning the itinerary, the wishes of Dr. McCormack were followed, and no attempt made to cover a large num-ber of places. One day was given to each of the selected cities, an afternoon meeting for the profession and an even-ing meeting for the public being the general plan. Letters from various points not on the itinerary, expressing regret that the number of cities covered was limited have been received. It is to be hoped that similar meetings can be arranged for these localities.

The following reports have been re-ceived:

Ann Arbor.

The second of the series of thirty medical meetings was successfully held in Ann Arbor by Doctor J. N. McCormack, Tuesday, October 16, 1906. The objects of the campaign are organiza-tion and education—the former for the profes-sion, the latter for the people. Inasmuch as the physicians in Washtenaw are organized—this be-ing practically the only thoroughly organized county medically in the state—effort in this direc-tion was not required by the representative on this occasion, and hence reserve energy was dis-charged in enlightening the laity. Two meetings were held—one in the afternoon, the other in the evening.

The Washtenaw County Medical Society and the medical students of the university assembled in the New Medical Building at 3 o'clock and listened to an address by Doctor McCormack on matters purely medical—teaching, ethics, eco-nomics, etc. The speaker expressed the opinion that only about one-half the physicians in the United States are familiar with modern methods, and that if the people were to receive attention commensurate with the gravity of ailment, in-stead of there being too many physicians the present number would stand duplication. The re-lation of one physician to another and to patient, received due consideration, and although ethics is a prerequisite that should be taught in the home, in the church, in the school, failure to im-part this instruction probably imbued the speak-

er with the belief that the idea of right conduct should be hammered into them when they reach college. The necessity for a chair of economics was a feature of the address upon which the speaker dwelt at some length. How to make a living—for medicine has a commercial side that is important and should be cultivated; meeting and examining a patient; the division of fees; life insurance examinations, et cetera, were questions that received consideration in this connection.

A luncheon was served in the Histologic Laboratory at the close of the afternoon meeting, and Doctor McCormack was entertained at dinner by Doctor Herdman in the evening.

A goodly number of representative citizens assembled in Sarah Caswell Angell Hall at 8 o'clock to listen to the popular medical address. President Loree, in introducing the speaker, announced that the close of the discourse, several persons would be called upon to discuss the questions involved. The trend of thought at this meeting contemplated prophylaxis, the patent nostrum evil—together with the ministerial indorsement rider, the venereal problem, counter prescribing, sanitation, quarantine, et cetera. The position of the profession on these questions is too well understood to require elucidation, but the fact is significant that when properly explained, the laity is found to heartily accord in the views entertained. The discussion which followed Doctor McCormack's talk was participated in by two ministers, two druggists, the dean of the Homeopathic Medical College, and the secretary of the University, the divines being allowed the privilege of opening and closing the argument.

The sextette was unanimous in indorsing the sentiments enunciated by Doctor McCormack, and each expressed the hope that the professions—ministerial, medical and legal—establish the practice of holding joint meetings with the laity for the purpose of disseminating intelligent ideas regarding various medico-moral questions, consequential to a people continually groping in darkness to recover the God-given heritage of health and happiness.

The discussion was concluded with a few appropriate remarks by Doctor William J. Herdman, Councilor of the First District, Michigan State Medical Society, and thus ended two very successful and profitable meetings.

JOHN WILLIAM KEATING, Sec'y.

### Lansing.

Thirty members of the Ingham County Medical Society attended the afternoon meeting addressed by Dr. McCormack and were enthusiastic over establishing a post-graduate course. A committee was appointed to consider ways and means for starting such a course.

About 100 citizens were in attendance at the evening meeting and close attention was paid to the address.

After the close of Dr. McCormack's address, Rev. F. S. Ward, Judge Edward Cahill, Supt. W. D. Sterling of the public schools, Supt C. E. Holmes of the School for the Blind, John F. Crotty and Dr. F. W. Shumway, Secretary of the State Board of Health, made short remarks, after which a rising vote of thanks was given Dr. McCormack for his valuable address.

L. ANNA BALLARD, Sec'y.

### Charlotte.

Dr. McCormack met the doctors of Charlotte and vicinity, which was well represented. The doctor gave a very interesting and instructive talk. All saw the need of more thorough organization and more thorough work. A committee of three, Drs. Knight, Rand and Mayer, was appointed to formulate plans and report at the next regular meeting, Oct. 25th.

A very representative audience gathered in the court room in the evening. Teachers, ministers, lawyers, business men, city officials and citizens were present, the ladies being in the majority. Mayor C. W. Truesdell presided.

The doctor spoke about one and one-half hours of the limitations and possibilities in the medical profession; of quackery in medicine, drug store practice, patent medicines, public sanitation, etc. He also showed the benefit to be derived by the public from a better co-operation with the medical profession.

After the lecture the chairman invited a discussion of the subject which was responded to by a number of those present. The only regret is that the audience was not larger.

C. S. SACKETT, Pres.

### Battle Creek.

Before an appreciative audience of about four hundred, Dr. J. N. McCormack delivered a very interesting and instructive address in Battle Creek Saturday evening, October 20th.

The meeting was presided over by Mr. Burrit

Hamilton, one of our leading attorneys, who after a few well chosen introductory remarks, presented the speaker of the evening.

Dr. McCormack very ably and entertainingly told us about many of the abuses that have crept into the medical profession. He described how doctors, through motives of jealousy had derided their colleagues until even the people thought that their own doctor was all right but all others were humbugs. He showed that this condition had obtained for centuries, even from the very dawn of written history, and suggested ways and means for eradicating the evil. He said that it was in a large measure eradicated in the professional ranks by the fact that doctors do not now run their neighbors down much; but it will take much time and education to remove the false impression from the masses.

Dr. McCormack dwelt at length upon the unselfish and altruistic work of the profession, and showed how they have been striving to remedy existing evils in the administration of our government. He told how little power the medical staff of our army has—how little they can do for the protection of our soldiers, and pictured the difference between 15 deaths from preventable disease to one death in battle in our Spanish war and the Japanese record of one death from preventable disease to four from battle in the recent war in Manchuria. This result is not due to the high attainments of the Japanese physicians, but rather to the co-operation they receive from their army officers—their physicians having power in their army.

The doctor also told us of the danger that will arise in Panama, since not one medical man is on the commission as one of the officers with power to do things, although the work of that commission is two parts sanitation and one part engineering.

Dr. McCormack spoke at some length about the poor pay of our profession, how half of them are too poor to practice medicine—that they cannot afford the magazines and instruments necessary. The doctor pointed out that a better paid profession would be a distinct advantage to the people, that they would be able to give a service of vastly more worth if they could afford the instruments and necessities for that work.

The address was followed by a few pointed remarks offering aid and support by Rev. M. McVeety, Prof. Coburn of the school board, Dr. W. H. Haughey, Dr. Kellogg and Chairman Hamilton, after which the meeting adjourned.

One lawyer was heard to remark after the

meeting that never before had he heard and learned so many truths and valuable facts in a year as he had during that address. They had simply poured in—things that he had never thought or dreamed of.

The meeting for the doctors was held Sunday afternoon in the chapel at the Sanitarium.

This meeting was one of a more informal nature in which Dr. McCormack told about the good work in Kentucky where there is not a quack or an advertising doctor and has not been for 14 years. There the State Board of Registration proceeds directly against all these men—and only asks of the local societies that they furnish evidence—that the board may have something to work on. The board does the rest. These irregulars are not allowed to practice at all or even to advertise.

The doctor suggested that the same thing could be done here in Michigan. Our State Board of Registration has power enough and really should undertake this work. That would then relieve the local men of the charge of jealousy that they are now subject to and be pretty sure that in a very short time this state might also be rid of this objectionable class of men.

Dr. McCormack also spoke of several other subjects—among them the lack of education along ethical teachings and medical bookkeeping in the colleges. He showed that it is this very lack on the part of the colleges that is causing a vast amount of trouble—that causes the feeling of jealousy among the doctors themselves—that gives the people the poor idea that they have of our profession. This very lack also is responsible for the fact that the doctors are under-paid—that so many people do not and never intend to pay their bills. All this should be remedied and Dr. McCormack has been laboring with the council on education of the A. M. A., almost in vain—but suggests that if they do not take hold of this subject soon, they be replaced by men who will.

Among the most important subjects brought out was the non-interesting character of many medical meetings and methods for improvement. He suggested a combination of the university extension idea and the Chautauqua idea in our county societies and outlined a course of work for us.

Upon motion of Dr. Kellogg, the chairman of the meeting, Dr. W. H. Haughey, was authorized to appoint a committee of five or more to carry out this idea of post graduate work, this committee to devise ways and means to select the teacher and see that they do this work and see to it that this scheme be put in force at the



earliest possible moment. The motion carried. Dr. Kellogg then tendered the use of a room for this work with all the conveniences and instruments at his disposal.

This work will be undertaken at once. The committee will be appointed in a few days and as soon as plans can be made the university extension idea will be inaugurated.

The scheme at present is to divide our society up into local clubs—one in Battle Creek, one in Marshall and one in Ablion—for local work at each place; the whole to work together as a joint society—and each one conduct its own meetings, meeting jointly from time to time for further study and to compare ideas and for mutual help.

W. H. HAUGHEY, JR.

#### Kalamazoo.

The McCormack meetings at Kalamazoo were a decided success. The afternoon meeting in the Academy of Medicine rooms was well attended by the doctors and everybody was pleased with Dr. McCormack's address, which will inspire us to do still better work.

The public meeting in the evening, however, was the important meeting. Dr. McCormack was greeted by a large audience at the Congregational church, before whom he delivered his splendid address and the enthusiastic discussion which followed attested the favor with which it was received. The discussion was participated in by lawyers, ministers and teachers in a manner that was very gratifying to Dr. McCormack.

Dr. McCormack is peculiarly qualified for the work he is doing. He knows how to say the right thing in the right way.

A. H. ROCKWELL, Councilor.

#### Holland.

We have had our McCormack meeting and we are all stirred up to the possibilities which have been presented to us by that brilliant man. Our afternoon meeting was a great success, as we all thoroughly enjoyed it and we had several men who most need to be present. Of course we all needed it, but there are always some who need to be told what we are trying to do. The evening meeting was marred by the weather but we stirred up a good deal of interest and we are well satisfied. The members have all nothing but the greatest praise for Dr. McCormack.

E. D. KREMERS, Sec'y.

#### Grand Rapids.

The McCormack meetings at Holland and Grand Rapids were a great success, both in attendance and interest manifested.

I am satisfied the doctor is doing a great work.

R. H. SPENCER, Councilor.

#### Eleventh District Meeting.

The Eleventh District Society met, as guests of the Montcalm County Society, at Greenville, October 26th, and was a great success.

We had with us Dr. A. P. Biddle, of Detroit; Dr. R. Bishop Canfield, of Ann Arbor, and Dr. J. N. McCormack, of Kentucky.

Aside from participating in the regular society work, Dr. McCormack gave a popular lecture in the evening, to which the public were invited.

The council meeting will, by invitation, be held next year in Muskegon.

H. L. BOWER, Sec'y.

Our district meeting passed off very well and there was a good attendance. The weather, both Friday and Saturday, was horrible, yet good, fair audiences turned out at both evening meetings. There is a strong desire to have Dr. McCormack's general address published and so arranged that reprints can be obtained by county societies. Many of the doctors at the Greenville meeting would like to have copies to send to their families.

W. T. DODGE, Councilor.

#### Ninth District Meeting.

The Ninth District meeting was held at the new Carnegie Library, Cadillac, October 29th, 1906, at 2 p. m.

The meeting was called to order by Dr. B. H. McMullen, who welcomed out of town guests and then introduced Dr. B. R. Schenck, of Detroit, who gave a talk on "Ovarian Neoplasms."

Discussed by Drs. Garner, Babcock, Wardell, G. D. Miller and McMullen.

Next was introduced Dr. J. N. McCormack, of Bowling Green, Ky., as speaker of the day, who gave a talk on what the county society should do.

Dr. C. B. Miller suggested that all present leave their names and addresses with the secretary.

Dr. Gauntlett read a paper on "Prostatic Massage," which was discussed by several members.

The meeting then adjourned to partake of a banquet served by the ladies of the Congrega-

tional church. After the banquet several toasts were responded to.

The following press notice gives an account of the evening meeting:

"The audience room of the church was almost filled by those who had accepted the invitation to hear Dr. McCormack's evening address, and that which they heard well repaid them. The need and value of harmony and unity on the part of the medical profession; the advantages that would come to the individual doctors, to their work and worth, and to the communities of which they are important factors, was an important division of Dr. McCormack's address. He also gave details of the very good results that had followed the adoption elsewhere of more systematic work on the part of local organizations in the direction of study and clinic work and made the value of such practical post-graduate work quite evident to the non-professional members of his audience as well as to his fellow doctors. But that feature of Dr. McCormack's address which was of greatest interest to most of his hearers was his appeal in behalf of an increased public interest in opposition to the spread of communicable diseases. He criticised the meager and very inadequate attention given in such directions by national and state and local authorities, and gave statistics which were startling and impressive as to the needless loss of life through ignorance and neglect, and also as to the great good that had followed intelligent, systematic public and professional work in opposition to the dissemination of disease. Dr. McCormack also referred to the bad results that attended the use of most patent medicines, and closed his address with a strong plea in behalf of co-operation on the part of doctors and ministers and teachers and lawyers and editors, and all active participants in community life, to assist in bringing about better conditions in health and morals and a happier and more useful individual and home life."

"Comments and suggestions were called for and some were given by members of the audience, as to the practical application of Dr. McCormack's idea and presentations. It was the opinion of all that much could be done in the directions of his appeals, and that something should be done. And thus came to an end the program incidents of the annual meeting of the Ninth Councilor District. It was a valuable event to Cadillac, and the thanks of the city are due to the members of the local committee of doctors through whom it was secured."

After the evening meeting, the members and guests again assembled at the library, where an informal discussion on many live topics was held.

A committee was appointed to take up the post-graduate course.

The meeting adjourned at 1 a. m., after an eleven-hour session.

W. J. SMITH, Sec'y.

#### Sault Ste. Marie.

We did not have a public meeting at this place for the very good reason that the notice we received of the time of Dr. McCormack's arrival was only twenty-four hours. It was impossible to hold any kind of a public meeting, but our county society met Tuesday, October 30th, and enjoyed a two-hour conference with Dr. McCormack. We consider it a very profitable evening for ourselves and deeply regret that our citizens did not have an opportunity of hearing this gifted representative of the A. M. A.

A. H. MILLER, Sec'y.

#### Bay City.

Dr. McCormack spoke in the city hall to a good-sized audience consisting mostly of teachers, doctors and club women.

He was introduced by Rev. Anderson, of the First Presbyterian church, who led in the discussion following the lecture. Other speakers were Father Rafter, M. A. Root, Mrs. W. W. Williams and Dr. Carrow, of Detroit. All expressed themselves as highly pleased with Dr. McCormack's sentiments.

Following the open meeting, a banquet was given at the Bay City club, when we again had the pleasure of hearing Dr. McCormack, and before adjournment the president of our society was instructed to appoint a committee to formulate plans for establishing a post-graduate course of study in this county.

A. W. HERRICK, Sec'y.

#### Sixth District Meeting.

After the annual meeting of the Genesee County Medical Society, the Sixth District Society assembled at Dryden Hall, in Flint, November 7, 1906.

The following program was given:

"Virchow," Dr. C. McCormick, of Owosso.

This was a historical sketch of the active portion of that great man's life.



"Gas-Ether Sequence for Surgical Anesthesia." Dr. Carl S. Oakman, Detroit.

The doctor demonstrated the Bennett inhaler and the method of using it in addition to discussing the advantages obtained by this combination of anesthetics. A full discussion followed.

"Obstetrician and Patient," Wr. W. P. Manton, Detroit.

Dr. J. N. McCormack, who is doing such good work among the county societies of this state at present, then addressed the societies.

His friendly talk and wholesome advice were so well given and were so thoroughly sincere that all were enthused. His advice was largely along the line of a post-graduate course for the members of the county society in order that more benefit would come from it and that the organization would be more firmly established.

He gave a strong plea for better relations between the doctors and advised more cordial and free intercourse with the public.

His talk resulted in steps being taken to follow his suggestions and we hope to report in the near future the existence of our own post-graduate school.

We were honored by the presence of our State President, Dr. Stockwell, of Port Huron, and the State Secretary, Dr. Schenck, of Detroit.

J. G. R. MANWARING, Sec'y.

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## Book Notices

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**Operative Gynecology.**—By Howard A. Kelly, M. D., F. R. C. S., Professor of Gynecological Surgery in the Johns Hopkins University, Baltimore. Second edition, revised and enlarged, with 11 plates and 703 original illustrations, 1330 pages. New York: D. Appleton & Co. 1906.

With the appearance of Kelly's well known work, some nine years ago, a new standard for medical books was established. Never before had such beautiful and accurate illustrations been produced, so that it may fairly be said that the work revolutionized medical publication. Many books have since appeared in which artists have aimed at the same standard of excellence. Few have attained the standard, none has surpassed it.

During the nine years, the first edition was several times reprinted. A new edition has now appeared.

The work is too well known to require an extended notice. The preparation of the new edition afforded the opportunity of presenting cer-

tain important changes in gynecologic surgery. The most extensive alteration is in the chapter dealing with carcinoma of the uterus, more particularly in that portion treating of abdominal extirpation. This section was written by Dr. J. A. Sampson, a recognized authority on the subject, and is beautifully illustrated by 56 new drawings.

Extensive changes have been made in the chapters on topographical anatomy, complete tear and ureter and kidney.

The work will appeal more than ever to the general practitioner, on account of new chapters dealing with Local and Palliative Treatments, Displacements and Pessaries, and Menstruation and its Anomalies. New chapters have also been introduced on Bacteriology and the use of the X-Ray in Diagnosis.

Many minor improvements have been made with the result that the work is better than ever. It will continue to be the standard English treatise on operative gynecology.

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**An Introduction to Physiology.**—By William Townsend Porter, M. D., Associate Professor of Physiology in the Harvard Medical School. Quarto, 587 pages, 74 illustrations. Philadelphia: J. B. Lippincott Company. 1906.

The old method of teaching physiology by means of didactic lectures and occasional demonstrations has given place in the best universities, to a method in which observation and experiments are made by the student himself.

The new method requires the printed account of fundamental experiments, accessory data grouped about these fundamental experiments and apparatus with which the student can work out these fundamental truths for himself. This volume is a collection of the statements of these truths and directions for proving them. It is divided into three parts, (1) the general properties of living matter, (2) the income of energy and (3) the out-go of energy. It is essentially a laboratory manual, but proves interesting reading for one who wishes to keep up with the work which is being done along the lines of experimental physiology.

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**Essentials of Human Physiology.**—By D. Noel Patton, F. R. C. P., Superintendent of the Research Laboratory of the Royal College of Physicians, of Edinburgh. Second edition, enlarged and revised, 5½x9 in., 444 pages, 162 illustrations. Cloth. Price, \$2.75. Chicago: W. T. Keener & Co. 1905.



Paton's work entitled "Essentials of Human Physiology" fully bears out the sense of the title, as it gives concisely those facts which are necessary to an understanding of the subject.

From the viewpoint of the student it is an invaluable aid—furnishing a good foundation upon which to further develop his medical education.

To the more advanced—and especially to the busy physician—it may be of great value, as its direct mode of expression may aid him to quickly freshen his memory—while if taken in conjunction with a more elaborate work it may suggest an excellent course along which to study—furnishing considerable information not found in some of the unabridged and less recent works.

The author has made a point of physiological chemistry, but has in all instances directed emphasis to the practical rather than to the ultra-scientific questions.

He has touched upon the most recent physiological subjects of which his chapter upon internal secretions is not of minor interest.

The possible unfavorable criticism that might be passed upon the work is that to the enthusiastic reader it seems too brief.

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**Second Report of the Wellcome Research Laboratories.** at the Gordon Memorial College, at Khartoum.—8x11 in. hes. 255 pages. Published by the Department of Education, Soudan Government, and distributed by the Directors.

This very elaborately published volume contains 14 monographs giving the results of original work done at the Wellcome Laboratory, in Khartoum. Thi laboratory is supported by Henry S. Wellcome, the prominent London manufacturer of drugs and chemicals. It is interesting to note that Mr. Wellcome is an American.

Four papers in the second report deal with the mosquitoes of the Sudan and contain many interesting facts.

An important paper is that on "Trypanosomiasis in the Anglo-Egyptian Sudan," from which we learn that the disease prevails to a considerable extent. The report details most important observations and inoculation experiments.

Another report of immense value to the Sudan, is that from the chemical laboratory, giving the results of analyses of Nile waters, milk, salt, gum Arabic, etc.

The papers all add something to previous knowledge of the subjects discussed.

## BOOKS RECEIVED.

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**Medical Communications of the Massachusetts Medical Society.** Published by the society in Boston.

**Obstetrics for Nurses.** By Joseph B. De Lee, Professor of Obstetrics in the Northwestern University Medical School. Philadelphia, W. B. Saunders Co., 1906. Price \$2.50.

**Diseases of the Digestive System.** Volume 3 of the Modern Clinical Medicine Series. Edited by Frank Billings, M. D., Professor of Medicine in the University of Chicago. New York, D. Appleton & Co., 1906.

**The American Illustrated Medical Dictionary.** New, Fourth Edition. By W. A. N. Dorland, A. M., M. D. Philadelphia, W. B. Saunders Company, 1906. Price \$5.00.

**Transactions of the New Hampshire Medical Society, 1905.** Published by the society.

**Recent Advances in the Physiology of Digestion.** By Ernest H. Starling, M. D., F. R. S., Professor of Physiology in the University College, London. Chicago, W. T. Keener & Co., 1906. Price \$2.00.

**A Syllabus of Materia Medica.** Compiled by Warren Coleman, M. D. Third edition. New York, William Wood & Company, 1906. Price \$1.00.

**A Text Book of Obstetrics.** By Barton Cooke Hirst, Professor of Obstetrics in the University of Pennsylvania. Fifth Revised Edition. Philadelphia, W. B. Saunders Company, 1906. Price \$5.00.

**Diet in Health and Disease.** By Julius Friedenwald, M. D., Clinical Professor of Diseases of the Stomach in the College of Physicians and Surgeons, Baltimore; and John Rhurah, Clinical Professor of Diseases of Children in the same. Second Revised Edition. Philadelphia, W. B. Saunders Company, 1906. Price \$4.00.

**Atlas and Text Book of Human Anatomy.** Vol. 1. By Professor J. Sobotta, of Wurzburg. Edited with additions by J. Playfair McMurrick, A. M., M. D., Professor of Anatomy at the University of Michigan. Philadelphia, W. B. Saunders Company, 1906. Price \$6.00.

**The Practice of Gynecology.** By W. Easterly Ashton, M. D., LL. D., Professor of Gynecology in the Medico-Chrurgical College of Phila-

delphia. Philadelphia, W. B. Saunders Company, 1906. Price \$6.50.

**The Technic of Operations Upon the Intestines and Stomach.** By Alfred H. Gould, M. D., of Boston. Philadelphia, W. B. Saunders Company, 1906. Price \$5.00.

**Abdominal Operations.** By B. G. A. Moynihan, M. S., F. R. C. S. Second Revised Edition, greatly enlarged. Philadelphia, W. B. Saunders Company, 1906. Price \$7.00.

**Retinoscopy.** By James Thorington, A. M., M. D., Fifth Edition. Philadelphia. P. Blakiston's Son & Co., 1906.

**A Compend of Genito-Urinary Diseases and Syphilis.** By Charles S. Hirsch. Philadelphia, P. Blakiston's Son & Co., 1906.

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## County Society News

### Clinton.

The officers of the Clinton County Medical Society, elected at the annual meeting, are: President, Dr. Earnest Schemer, Fowler; vice-president, Dr. Martin Weller, St. Johns; secretary-treasurer, W. A. Scott, St. Johns.

Our society has about 20 members and is in a flourishing condition.

W. A. SCOTT, Sec'y.

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### Genesee.

The annual meeting of the Genesee County Medical Society was held in the Dryden, Flint, November 7, 1906. The following officers were elected: President, Dr. Abram Goodfellow, Clio; vice-president, Dr. M. S. Knapp, Flint; secretary-treasurer, J. G. R. Manwaring, Flint, Mich; delegate to state meeting at Saginaw, Dr. T. S. Conover, Flint; alternate delegate, Dr. H. R. Niles, Flint; members of board of directors, Drs. G. V. Chamberlain and E. D. Rice, Flint.

J. G. R. MANWARING, Sec'y.

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### Ingham.

The annual meeting of Ingham County Medical Society was held November 8th, 1906, at the residence of Dr. L. W. Toles. Twenty-three members were present. Four new members were

voted in, making a membership of forty-eight.

After the reading of a communication from Dr. McCormack, relative to the resolutions of the Kentucky State Medical Society favoring the charge of five dollars as the minimum fee for life insurance examinations, the society endorsed the resolution.

The following officers were elected: President, Dr. G. B. Wade, Laingsburg; vice-president, Dr. R. E. Miller, Lansing; secretary-treasurer, Dr. L. Anna Ballard, Lansing.

The subject of the address of the retiring president, Dr. J. W. Hagadorn, was "The Better Breeding of the Human Species." Following the meeting an elaborate dinner was served to the doctors and their wives.

L. ANNA BALLARD, Sec'y.

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Dr. J. W. Hagadorn, president of the Ingham County Medical Society, spoke in part as follows:

"Speaking of a healthy child, leads to the subject I wish to discuss briefly,—that of the breeding of the human being, which to my mind is very important and thoroughly neglected. In the operation of Nature, whether in animal or vegetable life, the laws of heredity and variation are everywhere present and visible. The law of gravitation is no more easily demonstrated than the law of heredity. There is no difference in the certainty of the two laws, for it only requires a second of time to demonstrate the former, but years to demonstrate the latter. It is an indisputable law in Nature, that "Like begets Like," but the offspring may be better than either of its parents, which is that phase of the law of heredity called "variation."

If it were not for that law, all improvement and progress would be impossible. Great efforts and excellent work is being done along the line of physical culture and training. Foods, and the care of the body, sanitation, etc., are being agitated by the physician, the schools and the clergy, but nothing is said or done in regard to the "breeding of the human species."

I want to say right here, that if proper selection of parents should be made in regard to the physical and mental condition, we could rear a race of people of fine physique, six feet tall, broad chested, head well set on shoulders, with a brain capable of magnificent developments. Let me ask, would we, with these conditions have a person susceptible to the bacilli of tuberculosis? It is conceded by all writers that the germ is not transmitted, but the inherited physical conditions create a susceptibility to the infection.



The deaf and dumb, the drunkard, the highwayman, the thief and the murderer are born; the conditions are largely inherited from the parent. It will not be many years, not more than a century or so, when a majority of the people on this continent will be deaf and dumb. It would only be necessary to take the figures from the census reports during the past fifty years, to convince yourself of this fact.

These things, including insanity, can be eliminated from the human race to a great extent by proper marriage. At the present time those persons seeking a license to marry are obliged to conform to certain requirements of the statute law. I would carry it a little further. I would not allow a person having consumption, gonorrhea, or syphilis, whether acquired or inherited, to have granted them, a license to marry. I would require a certain mental and physical condition. This would eliminate the habitual drunkard, the condition that makes the thief, a murderer, a highwayman or an indolent person. I would not allow two deaf and dumb persons to intermarry.

The time has come when all contagious diseases should be reported and restricted by the state and local boards of health. I refer particularly to syphilis and gonorrhea, the most dangerous and damnable of all contagious and infectious diseases, the most dangerous, possibly excepting tuberculosis, to the public health.

Let a case of smallpox occur in the city of Lansing, or a dog go down the street with hydrophobia, the health officers, police force and all the citizens would be alarmed and ready to create an agitation along the line of preventing the spread of smallpox and hydrophobia. Still, you are obliged to admit to your homes and allow your sons and daughters to associate with young men afflicted with syphilis and gonorrhea. Doctor Cumston, of Boston, in a paper read before the section on Hygiene and Sanitary Science of the American Medical Association, said: "I do not believe that I am going too far when I say that gonorrhea in the female is grave, prodigiously grave, and that it may be considered as the most fearful wound in young households."

Statistics show that one-half of all abdominal operations in the female is due to gonorrheal infection. No one knows as well as the physician the long train of disabilities that follow syphilitic infection. It does not stop with the infected individual, but goes down to the innocent generation that follows.

You think this cannot be brought about. I

think it can. It requires courage and nerve on the part of the physician and boards of health. No coward need to enter in this fight. All radical and beneficial reforms are brought about by agitation and education.

Prince Morrow says in a recent article, "that the general principle is laid down, that the education of the public is the most valuable of all measures for the prevention of contagious diseases. Its importance is emphasized in the cure of diseases, the communication of which lies entirely within the control of the individual. The restriction and prevention of these diseases and the physical and mental condition necessary for proper marriage, can be accomplished by education. It may take years to do it."

The education of the people along these lines lies largely in the hands of the profession. It should be taught in the schools and by the clergy. And God only knows, that some time in the future, politicians may be born who have the courage and brains to enact a law, that will protect future generations against these most horrible diseases.

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#### Monroe.

A very interesting and profitable session of this society was held in Monroe on the 18th of October. Among the most important papers presented were those of Dr. J. H. Jacobson, of Toledo, O., and Dr. W. F. Metcalf, of Detroit, the former taking for his subject "The Present State of the Surgery of the Stomach, with Special Reference to Gastric Ulcer and Cancer of that Organ," and the latter, "The Care of the Parturient Woman, with Special Reference to Asepsis."

The following officers were elected for the ensuing year:

President—Dr. Ellis W. Kelley, Temperance.

Vice President—Dr. L. C. Knapp, Monroe.

Secretary and Treasurer—Dr. Geo. F. Heath, Monroe.

GEO. F. HEATH, Sec'y.

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#### Muskegon-Oceana.

The regular meeting of the Muskegon-Oceana Counties Medical Society was held at the office of Dr. Cavanagh, November 2, 1906. Meeting called to order by President Denslow. Minutes of last previous meeting read and approved. Members present: Drs. Cavanagh, Denslow, Powers, Vanderlaan, Hartman, Williams, Oost-



ing, Olsen, Eames, Ellison, Chas. F. Smith, Wicks and Chapman. Dr. E. A. Halstead, of Chicago, was present. Dr. Cavanagh announced that he would very gladly retire his paper for the evening and give preference to Dr. Halstead if he would favor the society with an address. Dr. Halstead exhibited some X-ray photographs and negatives of some special cases of flating bodies in knee joint; spine of the knee joint; esophageal diverticula; and irreducible fracture of the first metacarpal bone, and gave a clinical talk upon same.

Resolutions were passed endorsing the resolutions passed by Kentucky State Medical Association in regard to life insurance examinations. Communications were read from Drs. Lamb, Nicholson and Davidson regarding papers for program. It was unanimously voted that Dr. Cavanagh's paper be heard at next meeting. A unanimous vote of thanks was tendered to Dr. Halstead for the interesting and instructive clinical talk. Meeting adjourned.

The order in which the members are expected to read the papers during the coming year is as follows:

Dr. Sullivan, Nov. 9th or 16th, 1906; Dr. Chapman, Nov. 23; Dr. Chas. F. Smith, Dec. 7th (this will also be an annual meeting); Dr. Davidson, Dec. 21st; Dr. A. A. Smith, Jan. 4th, 1907; Dr. Denslow, Jan. 18th; Dr. Quick, Feb. 1st; Dr. Eames, Feb. 15th; Dr. Powers, March 1st; Dr. Ellison, March 15th; Dr. Oosting, March 29th; Dr. Garber, April 12th; Dr. Olson, April 26th; Dr. Hartman, May 10th; Dr. Nicholson, May 24th; Dr. Hull, June 7th; Dr. Donald McIntyre, June 21st; Dr. Marshall, July 5th; Dr. Ingram, July 19th; Dr. Lamb, Aug. 2nd; Dr. Kennedy, Aug. 16th; Dr. Keyes, Aug. 30th.

It is hoped and expected that each of the physicians above named will respond either in person or by letter at the next meeting, stating positively that said physician will or will not give a paper on the date set opposite the name above. Also be sure to give name of your subject so that the committee on program and scientific work may be enabled to get out proper programs for the year. It is also expected that at times during the year the society will be favored by papers and talks by out of town physicians and surgeons of note. These occasions must be later arranged for, probably by special meetings.

It is expected in so far as practicable, that each member entertain the society on the occasion of the date set opposite his name. This system of "Boardin' 'Round" has been proven to be excel-

lently satisfactory. It insures the presence of the member who is to read the paper of the evening.

Hunt up your subject at once. Let's all take hold and make the winter's series of meetings very successful.

V. A. CHAPMAN, Sec'y.

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### Schoolcraft.

The regular annual meeting of the Schoolcraft County Medical Society was held in Manistique, on Wednesday, October 31st, and was well attended by the physicians of the county. The annual election of officers occurred as follows:

President, Dr. J. M. Sattler, Manistique; Vice-President, Dr. C. S. Layton, Blaney; Secretary and Treasurer, Dr. G. M. Livingston, Manistique; Board of Directors, Dr. O. C. Bowen, Manistique, Dr. J. M. Lipson, Germfask.

A committee was appointed to arrange for a banquet to be held in the Hotel Ossawinamakee, Manistique, at the next regular meeting in January.

G. M. LIVINGSTONE, Sec'y.

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### Tri.

The officers elected at the annual meeting are as follows: President, Dr. C. E. Miller, Cadillac; Vice-President, Dr. C. E. Neihart, South Boardman; Secretary-Treasurer, Dr. W. J. Smith, Cadillac; Delegate, Dr. W. B. Wallace, Manton; Alternate, Dr. J. M. Wardell, Cadillac.

W. J. SMITH, Sec'y.

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### Tuscola.

At the annual meeting of the Tuscola County Medical Society, the following resolutions were unanimously adopted:

*Resolved*, That a minimum fee of \$5.00 be charged for old line life insurance examinations, and that a minimum fee of \$2.00 be charged for fraternal insurance examinations. Further, be it

*Resolved*, That any member of this society who shall make examinations at a lower fee shall be considered guilty of unprofessional conduct. And be it further

*Resolved*, That the Secretary be instructed to send a copy of these resolutions to the various insurance companies doing business in Tuscola county.

C. W. CLARK, Sec'y.

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### Wayne.

District Society No. 1 was organized at Ply-

mouth, on October 31, as a branch of the Wayne County Medical Society, with F. P. Kenyon, Plymouth, as chairman, and R. B. Cummings, of Wayne, as Secretary. The society is to meet monthly, alternately in Plymouth, Northville and Wayne, and will give to some thirty practitioners in that part of the county all the advantages of a local medical society. The attendance at the first meeting was gratifying; every town in the district being represented, and the enthusiasm displayed augurs many good things for the new society. It is hoped that similar organizations may be formed in other outlying districts of Wayne county.

Calhoun.

The post-graduate course of study has been outlined as follows:

Anatomy and Gross Pathology, weeks of Nov. 19, Jan. 7, Feb. 4, March 4, April 1.

Physiology and Hygiene, weeks of Nov. 26, Jan. 14, Feb. 11, March 11, April 8.

Laboratory Diagnosis, weeks of Dec. 10, Jan. 21, Feb. 18, March 18, April 15.

Practice of Medicine, weeks of Dec. 17, Jan. 28, Feb. 25, March 25, April 22.

As conducted at Albion:

DATE.	SUBJECT.	UNDER DIRECTION OF.
Nov. 20	Air Passages and Accessory Sinuses .....	Dr. Abbott
Nov. 27	Physiology of Nutrition...	Dr. Hafford
Dec. 11	Bacteriology .....	Dr. Ramsdell
Dec. 18	Causation of Disease.....	Dr. Howard
Jan. 8	Abdominal Parieties .....	Dr. Marsh
Jan. 15	Physiology of Circulation...	Dr. Foster
Jan. 22	Pathology .....	Dr. Herzer
Jan. 29	Preventive Medicine....	Dr. Parmarter
Feb. 5	Triangles of Neck .....	Dr. Herzer
Feb. 12	Physiology of Respiration..	Dr. Bangham
Feb. 19	Blood Examination ....	Dr. Chauncey
Feb. 26	Art of Diagnosis.....	Dr. Marsh
Mar. 5	Anatomy of Perineum....	Dr. Ramsdell
Mar. 12	Physiology of Elimination..	Dr. Parmarter
Mar. 19	Examination of Excretions..	Dr. Abbott
Mar. 26	Art of Prescribing .....	Dr. Bangham
Apr. 2	Anatomy of Peritoneum ..	Dr. Hafford
Apr. 9	Physiology of Digestion....	Dr. Foster
Apr. 16	Parasites .....	Dr. Chauncey
Apr. 23	Chronic Diseases .....	Dr. Howard
Time of Meetings, 7:30 p. m.		

As conducted at Battle Creek:

DATE.	SUBJECT.	UNDER DIRECTION OF.
Nov. 19	Applied Anatomy of Nervous System .....	Dr. Warden
Nov. 26	Physiology of Nutrition...	Dr. Kingsley
Dec. 10	Bacteriology .....	Dr. Eggleston
Dec. 17	General Causation of Disease.	Dr. Miller
Jan. 7	Applied Anatomy of Nervous System .....	Dr. Warden
Jan. 14	Physiology of Circulation.	Dr. Kingsley
Jan. 21	Stomach and Blood Analysis .....	Dr. Eggleston
Jan. 28	Preventive Medicine .....	Dr. Miller
Feb. 4	Hernia .....	Dr. Warden
Feb. 11	Physiology of Respiration and Hygiene of Ventilation..	Dr. Kingsley
Feb. 18	Laboratory Pathology ...	Dr. Eggleston
Feb. 25	Art of Diagnosis .....	Dr. Miller
Mar. 4	Important Muscle Groups..	Dr. Warden
Mar. 11	Physiology of Conception and Hygiene of Home ....	Dr. Kingsley
Mar. 18	Urinalysis .....	Dr. Eggleston
Mar. 25	Chronic Diseases .....	Dr. Miller
Apr. 1	Peritoneum .....	Dr. Warden
Apr. 8	Municipal Hygiene .....	Dr. Kingsley
Apr. 15	Food Adulterants and Fecal Examinations .....	Dr. Eggleston
Apr. 22	Art of Prescribing .....	Dr. Miller
Time of Meetings, 8 p. m.		

Meeting Places:—

- Dr. Warden's section at Post Tavern.
- Dr. Kingsley's section at his office.
- Dr. Eggleston's section at Medical College Lab.
- Dr. Miller's section at his office.

Michigan Personals

Dr. Simeon French, of Battle Creek, recently celebrated his 90th birthday.

Dr. F. J. Fralich has been appointed health officer of Greenville.

Dr. E. L. Shurly, of Detroit, has gone to Europe.

Dr. A. D. McLean, of the Medical Service of the United States Navy, is stationed in Detroit.

Dr. M. B. McCausland has removed from Covert to Imlay City.

Dr. A. J. Rickel has located in Northville.

Dr. David Inglis, of Detroit, has been appointed lecturer on nervous diseases at Ann Arbor.

Dr. A. L. Blanchard, of Northville, will spend the winter in the South.

Dr. C. G. Jenkins has been elected a member of the School Board in Lansing.

Dr. Leland Tower has removed from Centerville to Battle Creek.

Dr. R. W. Alton, of Portland, has gone south for the winter.

Dr. W. Kahn, Saginaw, has been appointed assistant to Dr. A. D. Aldrich at Winona.

Dr. and Mrs. Raymond D. Sleight, Battle Creek, have gone to Europe.

Dr. R. W. Walton, Portland, will spend the winter in New Mexico.

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## Deaths

Charlotte Fitzgerald, M. D., died at Plymouth, October 4th, 1906.

Harrison H. Power, M. D., one of the oldest practitioners of Ionia County, died at his home in Saranac, October 20, 1906.

J. L. Johnston, M. D., died from cerebral hemorrhage, at his home in Chester, September 14, 1906.

Dr. Joseph P. O'Dwyer, one of Detroit's best known physicians, died at his home, 324 Fourteenth street, November 13th, following an illness of more than a year.

Dr. O'Dwyer, who was 37 years old, was born in Strathroy, Ont. He entered the Columbia College of Physicians and Surgeons when 16 years of age and graduated when 20. After a year spent in work at various hospitals in New York, Dr. O'Dwyer came to Detroit and located within a stone's throw of his late residence. For sixteen years he remained in this locality and built up a large practice.

About a year ago his health began to fail and he spent four months at his home in Strathroy and five months at Winyah Sanitarium, Asheville, N. C. After his return from North Carolina in June he was confined to his home until the end.

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## Marriages

T. L. Ryan, M. D., to Miss Marie Barrett, at Detroit.

E. M. Chauncey, M. D., Girard, to Miss Myrtle Campbell, at Girard, October 10, 1906.

W. E. Matchette, M. D., Hancock, to Miss Mabel Hambitzer, of Houghton, October 10, 1906.

Geo. A. Seybold, M. D., Jackson, to Miss Gertrude M. Vliet, of Detroit, October 25, 1906.

Arthur Gordon Doty, M. D., to Miss Ruth Margaret MacRitchie, both of Hillsdale, October 25, 1906.

L. J. Crum, M. D., Kalamazoo, to Miss Minnie Shorr, of Cleveland, Ohio, at Kalamazoo, October 24, 1906.

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## Surgical Treatment of Exophthalmic Goitre.

—SCHULTZE gives the results of fifty operations for Graves disease, performed by Prof. Riedel, of Jena. The cases were observed from one to twelve years. Of the fifty patients, 36 (72%) were cured; 6, (12%) much improved; 1, (2%) not improved; 7, (12%) died. Of the seven cases of death, five died in the first twenty-four hours after operation, under symptoms of insufficiency of the heart and general collapse; the sixth fatal case was caused by post-operative pneumonia three days after the operation, the seventh, by pneumonia, two weeks after operation.

From medical side, the serum therapy (serum of thyroidectomised goats) has been widely advocated for the treatment of Graves disease during the last year. Antithyroidin and Rodagen are the main drugs used in Europe in this line. SCHULTZE compares the results of this treatment with the surgical results, and concludes: at present, the surgical treatment of Graves disease gives the best and most permanent results.—*Mitteilungen aus den Grenzgebieten der Chirurgie und Medizin*, Vol. XVI, Part II.

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Unconscious patients should be catheterized at regular intervals of about eight hours. An acutely distended bladder should not be completely emptied in one sitting. Its rapid collapse may produce hemorrhagic cystitis.

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After operations upon the rectum, especially after those involving division of the sphincter ani, voluntary urination is apt to be inhibited for a day or more. This is especially the case when the stretching is done in a sagittal direction, *i. e.*, towards the urethra and the coccyx. It may save catheterization, therefore, if the stretching is done only laterally, *i. e.*, towards the tubera ischii.



## Progress of Medical Science

### MEDICINE

Conducted by

T. B. COOLEY, M. D.

**Percussion of the Spinal Column.**—KORANYI has for some fifteen years been making observations on the note elicited by percussion over the various portions of the spinal column, being led thereto originally by the discovery of the phenomenon in pleurisy known as the "paravertebral" or "pleuritic triangle" afterward noted independently by Grocco. He has published some previous papers on the subject and one or two other clinicians have also done similar work, but no general attention has been attracted to it.

The value of spinal percussion depends on the fact that when a blow is struck over the spinous process, the body of the vertebra acts as a pleximeter, and the resulting sound is an index of the character and condition of the underlying organs, and may thus furnish information concerning them not to be obtained in any other way. The percussion note in the normal subject is surprisingly uniform, and the column may be divided into 5 "zones," according to the normal note. These are: 1st zone, cervical vertebrae, note dull but slightly tympanitic with strong percussion until the 7th, which is flat. The tympanitic note is clearer, with the mouth open; 2nd zone: 1st to 5th dorsal, note dull over 1st and 2nd, becoming clearer over 3rd and 4th; 3rd zone, 5th to 11th, note clear, but not tympanitic; sometimes not wholly clear over 5th; 4th zone, 12th dorsal to 5th lumbar; note dull, becoming slightly less so to 4th lumbar, over 5th lumbar slight tympanitic sound; 5th zone, sacrum and coccyx, quite clear tympanitic sound. These changes in tone are all readily explained by the anatomical relations of the spinal column to the larynx, esophagus, aorta, bronchi, lungs, and the abdominal organs and viscera. Normally there is practically no change with change of position, but in certain pathologic conditions, there are decided and quite pathognomonic changes between percussion in the vertical and in the horizontal (knee elbow) position.

KORANYI has found the method useful in diagnosis of pleurisy, tumors and aneurisms of the mediastinum, floating liver and aneurisms, cyst of the pancreas, tumors and cysts of abdominal organs, etc.

As to technic, the subject must be in an easy position which will not cause tension of any of the spinal muscles or ligaments. Comparison should always be made between the vertical and knee elbow position. KORANYI uses a narrow ivory plexometer which should be struck just over the spinous process with the fingers or hammer, using as nearly uniform force as possible. The proper force is that which brings out well the clear note in the middle dorsal region. Normal vertebrae are essential to successful use of the method, which is also interfered with considerably by a thick fat layer.—*Zeitsch. für Klin. Med.*, Vol. 60, p. 295.

**Alcohol in the Diet of Diabetics.**—BENEDICT and Török undertook a series of experiments in Koranyi's clinic intended to throw some light on the vexed question of the source of the acetone bodies in diabetes, their method of procedure being to substitute for a certain part of the fat in a carbo-hydrate-free diet a corresponding amount of alcohol, on the assumption that if the fat is the source of the acetone, substituting for it a substance which will take its place in metabolism but will not form acetone, will diminish the amount secreted. The experiments were made on non-diabetics who had acetone in the urine, as well as on diabetics. In the non-diabetics the results were conflicting and inconclusive. In the diabetics, on the other hand, the results were quite uniform, and seemed to show that the alcohol had three effects: 1. Markedly to diminish the production of acetone. 2. To lessen the excretion of sugar. 3. To have more value in preventing nitrogen waste than did the fats. BENEDICT and Török do not claim to have shown by these experiments that the fats are the only or the chief source of the acetone in diabetics, for this is a very complicated question admitting of no such easy solution; but they think they have shown the fats to be one source, and moreover to have given an experimental explanation for the common clinical observation of the value of alcohol in the diabetic's diet.—*Zeitsch. für Klin. Med.*, Vol. 60, p. 329.

## SURGERY

Conducted by

MAX BALLIN, M. D.

### Elimination of Cavities in Operative Wounds.

—MOSETIG MOORHOF gives his experience with his iodoform plombe in filling cavities in bones. The plombe is prepared as follows: Equal parts of spermaceti and sesam oil are melted, filtered and sterilized. Forty grams of finely powdered iodoform are then thoroughly mixed with the first mixture. This paste has to be melted before using to about 50° C. and is poured hot in the cavity. Author has filled with this mass, cavities originating from all forms of osteomyelitis, bone-abscesses, tubercular bone cavities, if removal of all infected tissue was possible. His conclusions are:

1. Elimination of so-called "dead spaces" in operative wounds is always to be aimed at, to prevent suppuration and its sequelae, as well as to promote more rapid healing.

2. It is appropriate to use hermetic filling of these spaces if other methods cannot be employed.

3. Conditions for filling (plombing) are as follows:

- (a) As to the cavity. Removal of all diseased tissue, new formation of the cavity by ablation down into sound tissue, to produce aseptic conditions and render cavity dry.

- (b) As to the filling. Preparation under aseptic precautions; the filling must be prepared with a permanent antiseptic, as its most important constituent. The mass should be poured into the cavity when liquid, and should solidify there to effect a hermetic closure.

4. The iodoform-plombe is merely a substitute; a locum-tenens remaining in the cavity until entirely absorbed by granulations, or partially absorbed and partially expelled.

5. Absorption or displacement takes place but slowly and gradually, proportionate to the production of the granulations, which serve as permanent organized filling. The gradual disappearance of the plombe keeping step with the progress of cicatrization may be observed radiographically.

6. The course of healing after use of iodoform plombe is, with correct technic, always aseptic. With complete closure of the wound, healing *prima intentione* is the rule. The final results are the best possible, also, from a cosmetic point of view, because retracted scars do not result, owing to the active organized substitute.—*Surgery, Gynecology and Obstetrics*, October, 1906.

### Experiments About Disinfection of Hands.

—Very extensive experiments with different methods of sterilizing the hands showed that the use of soap, hot water and brush is not efficient enough even if continued for 20 minutes. Washing the hands with alcohol from 1½ to 2 minutes removes the germs far better than brushing with soap and water for 20 minutes. Washing with alcohol removes about 99% of the germs present in 2 minutes. It is important to use from 6 to 10 different pieces of cotton saturated with alcohol and to rub the hands with the cotton. A mixture of alcohol and ether in the proportion of 2 to 1, to which ½% of nitric acid is added seems to be the most effective disinfectant of the hands. It removes not only the superficial germs of the hand but also those from the deeper skin layers. About 5 oz. of the acid-ether-alcohol mixture should be applied the same as alcohol. The sterility of the hands can be made nearly complete by applying a 10% solution of hydrogen peroxide after the acid-ether-alcohol treatment. The acid-ether-alcohol mixture followed by hydrogen peroxide is more effectual in sterilizing the hands, takes much less time, and irritates the hands less than the long brushing with soap and water.—Dr. Schumburg, *Archiv fuer klinische Chirurgie*, Vol. 79, Part 1.

### Dorsal Fixation of the Arm as Treatment for Fracture of the Clavicle.

—BAYER had in two cases of fracture of the collarbone, splendid results by fixating the forearm across the back in the following way: an adhesive plaster strip runs vertically from the external fragment of the clavicle over the head of the humerus, down the back, pulling the head of the humerus and the outer part of the clavicle backward; another strip crosses the first, running from the shoulder forward over the fracture, the thorax and olecranon, and returns over the back to the shoulder. A third strip surrounds the wrist and runs up over the back to the shoulder. A gauze bandage (after Desault) fixates the arm in this position on the back. A disadvantage of this method is that the patient is unable to lie on his back, but it is easy to convince ourselves that the described position of the arm effects a strong extension on the clavicle.—Prof. Bayer, *Zentralblatt fuer Chirurgie*, 1906, No. 37.

## GYNECOLOGY AND OBSTETRICS.

Conducted by

REUBEN PETERSON, M. D.

**The Indications for the Interruption of Pregnancy.**—An interesting symposium on this subject was read before the St. Louis Medical Society at a recent meeting. Diseases of the kidneys, tuberculosis, heart disease and hyperemesis are considered.

In regard to the period of interruption, we may speak (1) of induced labor, at or near term; (2) of induced premature labor, between the 24th and 38th week; (3) of induced miscarriage before the 24th week. In (1) and (2) the induction is practised in the interest of either the mother or child; (3) implies the sacrifice of the fetus. Induction in the interest of the mother only was considered.

SCHWARTZ says that in 27 years of special practice, kidney diseases have never called for the interruption of pregnancy except shortly before term, when the viability of the fetus was assured. Chronic nephritis as a rule calls for no interruption when dietetic and other well recognized general measures are employed. Toxic albuminuria usually yields to treatment. Eclamptic symptoms endanger both mother and fetus and require a rapid delivery.

WARFIELD says that the question of tuberculosis as an indication admits of much discussion. Diametrically opposite views are held by the authorities. BACON calculates that 1 to 1.5 per cent of all pregnant women have tuberculosis in such a degree that it can be detected if a careful examination be made, or from 24,000 to 36,000 cases yearly in the United States.

In tuberculosis of the larynx, all agree that pregnancy should be interrupted in the early months; unless the diagnosis is made before the third month, however, the procedure is not justifiable.

In tuberculosis of the lungs, there is no rule, and every case must be decided on its individual merits, after the most careful consideration with a consultant. The lung lesions are apt to increase in severity, and after delivery, to develop rapidly, but such is not always the course. Previous tuberculosis is more favorable than one that develops just before or during pregnancy.

The well known fact that children born of

mothers with far advanced tuberculosis may be healthy is a strong argument against any interference with the pregnancy. In advanced tuberculosis, the child should receive the first consideration; in early, the mother.

Careful physical examination of the lungs should be as much of a routine as the measurement of the pelvis. Particular attention should be paid to the convalescence from colds, grippe, pneumonia, and pleurisy. Beware a diagnosis of "malaria." No tuberculous mother should nurse her child.

VOGT says that although pregnancy associated with heart lesions is a very serious matter, its seriousness is often exaggerated. The prognosis for both mother and child is much better than usually stated. FELLAN believes that only about one-seventh of the cases are ever detected.

Patients with heart trouble usually have trouble during the early months. If the indication for the interruption—failure of compensation—should later arise, we must bear in mind that the dangerous symptoms are usually of least gravity during pregnancy and that they become greater during labor, for the extra strain and sudden drop in blood pressure may kill the patient, and we have then simply helped to bring about what we tried to avoid.

The question resolves itself into this: When during the course of pregnancy, disturbances of compensation arise which are not amenable to treatment, in fact, which get worse under treatment, then, and then only, are we justified in inducing labor. The mere presence of a heart lesion is never an indication.

MOORE adopts Williams' classification of the causes of hyperemesis: (1) reflex, (2) neurotic, (3) toxemic. With our present knowledge, we are justified in recognizing but one form in which therapeutic abortion is indicated—the toxemic form. The early symptoms of this form do not differ from those of other forms. Later on the symptoms are quite characteristic. Blood appears in the vomitus, the skin becomes icteric, epigastric pain is severe and the blood shows albumin, blood and casts.—*The Interstate Medical Journal*, November, 1906.



## PATHOLOGY AND BACTERIOLOGY

Conducted by

A. P. OHLMACHER, M. D.

**The Basis and Application of Wright's Opsonic Theory.**—That the German profession has been tardy in acknowledging Wright's theory of opsonins and of treatment by bacterial vaccines is pointed out by WEINSTEIN who, on returning from a sojourn in Wright's laboratory, proceeded to make a practical test of the methods of opsonic therapy. This, his first communication, deals with cases of staphylococcus infection, eleven in number, and includes examples of recurring or chronic furunculosis and of chronic, intractable acne. In each case the staphylo-opsonic index was taken at the outset of the treatment, which consisted of injections of staphylococcus vaccine; and during the progress of the test, opsonic measurements were regularly made. The usual reaction, a temporary lowering of opsonic power with slight indisposition on the part of the patient, followed the injections, constituting Wright's "negative phase," to be succeeded by increased opsonic power and improvement in local and constitutional conditions, the "positive phase." Except for slight temporary discomfort in a few of the cases, no local effect of the injection was experienced. From four to eleven inoculations were administered during the treatment which resulted in complete recovery in all the cases of furunculosis (four in number), and of perfect recovery in four of the acne cases, and pronounced improvement in the other three which were still under observation at the time of the report.—*Berliner klin. Wochenschr.*, No. 30, 1906.

**The Cure of Postoperative Abdominal Fistulas With Vaccines According to Wright's Principle.**—A second communication by WEINSTEIN deals with his further experience in applying the method of Wright and concerns the results in various fistulas remaining after abdominal operation. Such fistulas result from various causes as for instance the subsequent infection of tissue unduly mutilated and impoverished in nutrition, or from spread of the pre-existing infection during the laparotomy (pyosalpinx, purulent appendicitis or peritonitis, abdominal tuberculosis, etc.), or from secondary infection of a drainage canal. As every surgeon knows, such fistulas frequently overtax all the resources of his art.

Four cases of intractable fistula comprise the material reported upon. The first case was one of extirpation of an ovarian adenocystoma in which extensive adhesions were encountered and

infection ensued with an unclosed secreting canal. It had existed four years. A culture from the secretion gave streptococcus and from the pure culture a streptococcus vaccine was prepared. The streptococco-opsonic index was low. Controlled by the opsonic index seven injections of the streptococcic vaccine were given during a period of seven weeks, when the fistula was completely healed. Two months later the patient reported with no sign of a relapse.

A second case was of tuberculous pyosalpinx with resulting drainage fistula of over three months' duration. Streptococci were isolated and cultivated from the secretion. After the third injection of a vaccine prepared from the streptococcus the fistula closed completely. Another injection effected a perfect cure. Very similar to the last is the third case, also of a five months' old fistula after extirpation of tuberculous pus tubes, though the treatment with the streptococcus vaccine was more prolonged, twelve injections during a period of ten weeks being required to effect the perfect recovery.

Periappendicular abscess was present in the fourth case and the fecal fistula had existed nine months. Bacillus coli and streptococcus were isolated from the secretion. Six injections of coli vaccine produced some improvement, but it was not until four injections of streptococcus vaccine were added that more pronounced progress was made, though a final closure of the fecal fistula had not been obtained when the author's report was presented. *Berliner klin. Wochenschr.*, No. 39, 1906.

**Antistreptococcic Serum in Surgical Prophylaxis.**—ARONSON takes issue with Zangmeister who concluded from his experience that Aronson's antistreptococcic serum was of questionable value in preventing the spread of infection set up by abdominal operations, either where there was already a focus of pyogenic infection, or where extensive operative manipulations predisposed the tissues to infection during or after operation. The very advanced examples of carcinoma on which Zangmeister reported are objected to, for on careful analysis it appears that of seven cases there remain only two of un-mixed streptococcic peritonitis in which death was not prevented by the serum. In the other fatal cases either a mixed streptococcus and colon bacillus infection was demonstrated, or no positive bacteriological finding was obtained. *Deut. med. Wochenschr.*, No. 34, 1906.

## PHARMACOLOGY AND THERAPEUTICS

Conducted by

C. W. EDMUNDS.

**Massive Doses of Salicylate in Acute Articular Rheumatism.**—CLARK gives the results obtained by the use of large doses of salicylates in acute articular rheumatism as practiced in the Lakeside Hospital, Cleveland, during the past six years. The routine method of treatment is to give 10 to 20 grains every hour while the patient is awake until toxic symptoms as tinnitus and deafness appear. The dose is then diminished to 10 to 20 grains every two to four hours, stopping with each recurrence of toxic symptoms. The average dose tolerated by these patients was 200 grains without any nausea, vomiting or depression.

The most striking result is the relief from pain which in some cases disappeared completely on the second day of treatment, and an average of all the cases showed relief by the fourth day. The temperature fell rapidly and usually reached normal in 36 hours. The cardiac complications seemed to be lessened in frequency, occurring in but 13 per cent. of the cases.

As to the danger of this free use of the drug, he thinks a limit should be placed upon the amount to be given, as one of their cases which had taken 580 grains, without any toxic symptoms, when the drug was stopped, suddenly developed signs of meningitis from which he died two days later. It was considered possible that the large amount of salicylate taken might have been a factor in the causation of the symptoms.

The tolerance of the rheumatic patients to the drug and the results obtained from its use have served as a diagnostic point between the various forms of arthritis. Patients affected with the gonorrheal form would not take such large doses and the relief from pain is not nearly as great nor does the swelling disappear as quickly. The results in these cases showed that the fever averaged 21 days, the pain 26, while the swelling did not disappear for 31 days.—*Am. Jour. Med. Sc.*, v. cxxxii, p. 429.

(No reference is made as to the effect on the kidneys. E.)

**Treatment of Sleeplessness.**—BROADBENT discusses various causes of sleeplessness and outlines appropriate treatment. When this symptom is associated with cold feet and is due to a general vaso-motor disturbance he finds a hot water bottle is of little use and that the best treatment is to stand in cold water and then rub the feet dry with a rough towel.

Sleeplessness, associated with high arterial tension, may often be overcome by a dose of calomel or one of the other purgatives. In such cases,

chloral acts well by lowering the blood pressure.

Insomnia, due to low blood pressure, may be relieved by cold sponging or a tepid bath. A cardio-vascular tonic is needed, such as digitalis or caffeine. A cup of beef tea or even tea or coffee may exercise the desired effect.

Gastro-intestinal derangement is a very common cause of sleeplessness, especially dilatation of the stomach in which condition the patient commonly wakes up after two or three hours' sleep. In these cases care must be taken to avoid flatulence by restricting the carbohydrates and fluids. Antiseptics are very useful, the best being salol, naphthol, cresote, not forgetting calomel. In certain cases it is absolutely necessary to resort to the hypnotics. In old patients vascular degeneration may make a normal cerebral circulation impossible or structural changes may have taken place which cannot be modified. In such cases the hypnotics are indicated and they may prolong life by increasing the comfort and happiness of the patient. Here the opium preparations are usually much to be preferred as the habit is not likely to be formed late in life. In young people all hypnotics have to be employed with great caution.

If the sleepless habit has been formed by nursing, anxiety, or worry, chloral or paraldehyde may be necessary for a few nights to break up the habit.—*Practitioner*, V. LXXVII, p. 1.

**Bromides in Epilepsy.**—SPRATTLING believes that not more than 50 or 60 per cent. of epileptic patients should be given bromides in any form. In those cases in which it is deemed necessary to use them they should be given in doses not larger than 12 or 15 grains or at the most 20 grains three times daily. Emergency doses may be larger.

He recommends in place of the bromides, pure bromine in oil of sesamum, given in the form of an emulsion. This, he thinks, retains the virtues of the bromides without their faults.

He also recommends the withholding of salt in the diet to augment the bromide action. Ten grains given under such a condition will be as effective as 20 would be if no limit was placed upon the amount of chloride taken. He says that as the efficiency of small doses has begun to be recognized it is very rare now to admit a patient into the Craig Colony suffering from bromic dementia.

He does not believe in the half century of their use in this disease that the bromides have raised the percentage of cures one point.—*N. Y. and Phil. Med. Jour.*, V. LXXXII, p. 391.



## DERMATOLOGY AND SYPHILIS.

Conducted by

A. P. BIDDLE, M. D.

**Notes on the Treatment of Epithelioma by Means of Caustic Potash.**—The excellent results obtained in most forms of epithelioma of the skin by the use of X-rays does not exclude the employment of older forms of treatment in cases where the latter give a more rapid and satisfactory result, or where circumstances render the use of the X-rays inconvenient.

Caustics have been employed from the most ancient times in the treatment of malignant growths, and, though their number is great, there are only a few which have preserved their popularity to the present day. These have been the caustics which destroy not only the disease, but all the tissues of the body so far as their influence can reach. The milder caustics as, nitrate of silver, the weaker acids, etc., may be set aside as having failed for the most part in the cure without relapse of morbid growths, and but little more can be said of the selective caustics as pyrogallol.

Among the most satisfactory of the destructive caustics, caustic potash is that which has given him the best results. It dissolves the horny layers of the skin, lays bare the diseased tissues and while destroying everything indiscriminately can be accurately limited in its effects by one accustomed to its use. The pain is not too severe for most patients to endure, it need not be prolonged, and can be arrested at any moment by the use of a neutralizing agent as acetic acid. The only caustic which can be compared with caustic potash for efficiency, is arsenic and the arsenical pastes are apt to give rise to severe and prolonged pain.

The paper is based upon the brief notes made in his private office of some 55 cases of epithelioma treated by means of caustic potash, cases occurring at various intervals in the course of years. These cases occurring in private practice, are of a comparatively less severe character than those seen in hospitals or dispensaries.

Of the cases treated, 30 were males and 25 females.

The age of two cases was not noted. Of the remaining 53, six were between 35 and 40, 11 were between 40 and 50, 16 were between 50 and

60, 13 between 60 and 70, four between 70 and 80, two between 80 and 90, and one was 94 years of age. The average age was between 56 and 57. These dates refer to the time when he saw the patients; the disease, especially in the older cases, had probably originated much earlier.

As regards the localization of the epitheliomata treated by caustic potash, they were all, or almost all, facial. In 30 cases the lesion was on the left side of the median line. In 13 cases, it was on the right side, and in 12 cases it was on or near the central line. The left cheek was the seat of the lesion in 10 cases, the left side of the nose in nine cases, and on the right side of the nose, the right cheek and the right temporal three times. On the left lower eyelid the lesion occurred also three times, while each ear was affected once and each side of the upper lip once.

Most of the lesions operated upon were quite small. Of the entire number six were noted as pin-head size or involving apparently a single sebaceous gland. Twenty-five were split-pea to small coin size. Five were between one and a half and two centimeters in diameter, and three were two and a half to three centimeters in diameter. A few were much larger.

In almost all the cases, entire reliance was placed upon the caustic potash. Occasionally slight relapses or what appeared to be such, were treated with one of the mineral acids, formalin, pyrogallol, etc.; but in most of the cases, nothing was added to the original cauterization.

In one case the wound made by cauterization healed in 10 days. In five cases it healed within two or two and a half weeks. In 11 cases it healed in from three to three and a half weeks. In 11 cases four weeks were required, and in seven cases five or six weeks. Four cases took eight weeks to heal, and in the remainder of the cases the duration of the cure was not noted, or, as happened in a few instances, the result was unfavorable. As a rule, the wound caused by cauterization with caustic potash takes four weeks to completely cicatrize.—*The Journal of Cutaneous Diseases*, August, 1906, Arthur Van Harlingen, M. D.



## PEDIATRICS

Conducted by

R. S. ROWLAND, M. D.

**The Etiology, Prognosis, and Indications for the Surgical Treatment of Tuberculous Peritonitis.**—DOUGLAS states that chronic peritonitis is usually tuberculous. Clinically it is most frequent between the ages of 20 and 40 years; however, it is not a rare condition in childhood, occurring then most often between the ages of two and four years. In the great majority of cases it is secondary to the pleura, abdominal or pelvic viscera, but may be primary. In childhood it is about equally divided between the sexes while in adults it is more common in females.

The prognosis depends on the type. Peritoneal tuberculosis appearing as a part of a general miliary tuberculosis offers but little hope for even temporary arrest. If the peritonitis is secondary to visceral or glandular infection, the peritoneal involvement may be arrested or controlled; but the ultimate prognosis will rest upon the activity of the primary lesion. In uncomplicated subacute and chronic cases the outlook is distinctly favorable. In the very young with inherited predisposition and severe infection the outlook is bad. The subacute and chronic forms are the most amenable to operation. In only exceptional instances of complications and for the relief of special conditions should operation be undertaken in the fibrous form. The ulcerous form offers an unfavorable outlook, yet even these cases may eventuate a cure.

In general miliary tuberculosis medical and hygienic measures should be employed. Dry, fibrous peritonitis presents the greatest difficulties in operation, and as it indicates a stage in the process of healing, surgical measures should not be employed, except to meet complication, such as intestinal obstruction. In the ulcerous form, with great emaciation and prostration, operation is contraindicated. Active lesions in other parts are unfavorable to operation.

Intervention is especially indicated when it appears that the peritoneal tuberculosis is the only active manifestation. In the very acute cases with onset resembling appendicitis or intestinal obstruction, expectant treatment should be preferred to operation.

DOUGLAS says that it is exceedingly fallacious to assume that the recognition of tuberculous peritonitis or a supposed diagnosis of that condition calls for immediate operation, but where

medical and hygienic measures have failed, operative interference is demanded.

Too frequently it is stated that simple incision is sufficient. The writer emphasizes the importance of complete removal of the exudate since the retained bacilli and their toxin will keep up the peritoneal inflammation and the fluid will reform. He thinks drainage is not desirable as it leads to infection and may produce fecal fistula. Neither is it shown that irrigation is essential. Efforts should not be made to detach adherent viscera further than to free encapsulated fluid and to relieve obstruction. Enlarged caseous mesenteric glands may be enucleated, though this is often difficult. It is of great importance to remove foci of infection when possible. This should invariably be done when the appendix or Fallopian tube is the source of supply. The greatest care should be observed in intra-abdominal manipulations to avoid abrasions and injury to the serous coverings of the viscera.

The general conclusion is justified that tuberculous peritonitis can be cured by laparotomy. Operative results give a recovery rate of from 25 to 30 per cent. The unsuccessful cases are those that have advanced disease in other organs.—*American Journal of the Medical Sciences*, October, 1906, p. 577.

**Adenoids in Early Infancy.**—MORNE thinks that adenoids are often overlooked at this age. The obstruction varies from time to time, and the cases are usually diagnosed as chronic coryza. Occasionally on crying, or even during sleep, the child may make a croaking sound like that of a frog. The diagnosis is easy if it is remembered that chronic coryza is in reality rare at this age.

The author does not hesitate to operate as early as the 15th or 20th day after birth if the obstruction interferes with the nursing, otherwise one can wait until the eighth or twelfth month. Cases should not be operated upon during an attack of inflammation.

One should arrange to see the patient again at the age of five or six years, for there may be recurrence after operations at this early age, though it is extremely rare after operations in late childhood. It is, therefore, wise only to operate in infancy when the obstruction is doing harm.—*Revue Mensuelle des Maladies de L'enfance*, January, 1906.

## ACTINOTHERAPY

Conducted by

H. R. VARNEY, M. D.

**High Frequency Currents in the Treatment of Small Benign Neoplasms and Hypertropies of the Skin.**—RANKIN in a recent consideration of the removal of small benign growths, regards with importance the selection of a method in treatment of these conditions, one that will produce a cosmetic improvement upon the original condition and not a conspicuous failure. Often with some of the older methods, which are all tissue destroying agents, one is liable to substitute an incurable blemish for one which might have been satisfactorily removed.

He states that with the high frequency currents in the removal of warts, freckles and vascular naevi, the results in the great majority of cases are most satisfactory. The most pleasing feature of this method, is the character of the resultant scar, which, with but few exceptions, has been imperceptible.

The electrical current used in this work is derived from the Ondin type of resonator energized by an induction coil carrying from one and three quarters to three amperes through the primary. The electrode used was the ordinary needle holder for electrolysis. In place of the needle, a piece of pointed copper wire is used as an applicator. He uses a mild current at first and recommends a mild application for the beginner and regulated by the tolerance of the patient. In the majority of cases, there is little, if any, pain. The time of each individual treatment and the number of treatments necessary to secure the desired result cannot be definitely stated and can only be determined by experience.

In the treatment of vascular naevi, one-fourth or one-half of the area is treated at one seance. In deep naevi, a second and even a third application may be required to eradicate the mark. After the first application has healed, the patient will be pleased with the change in color and return for further treatment.

In hairy naevi, the action of the spark does not extend deep enough to destroy the hair follicle, yet this can be removed with the electric needle at a later date.

He states that while treating a nevus that had previously been treated with acid, with the result of an objectionable scar, he was led to apply the spark to the scar with the result that the ugly scar was completely obliterated.—*Archiv. of Physio. Ther.*, September, 1906.

**Treating Osteo Arthritis and Tubercular Osteitis by Means of the X-Rays.**—RIDARD and BARRET, in publishing the results of their obser-

vations in the treatment of osteitis with the X-rays, arrive at the conclusion that when the osteitis is superficial and can be exposed from different sides, the action is rapid and curative. When the form of disease is deep, as in hip joint or Pott's disease, the effect is less favorable. In the superficial condition, the pain and loss of function disappear, swelling is reduced and fistulae, if they exist, are healed.

He is of the opinion that the X-ray is of decided value in tubercular bone disease, yet may never be recognized as a generally recommended method of treatment. Nevertheless, the influence of the light is favorable.

No evil results from the ray have thus far revealed themselves.

He recommends the application of the ray with power of penetration, giving his treatments from 12 to 15 days apart, more often sittings being given when the region affected permits of application from different sides. To prevent radio-dermatitis, he recommends the use of some form of filter, as aluminum sheeting, to shut out the soft superficial rays.—*Archiv. d-Eletricitè Med.*, February, 1906.

**X-Ray Diagnosis of Kidney Stone.**—HOLLAND, in reporting his results in diagnosis of kidney stone by radiography in a previous paper published over two years ago, now summarizes his further experiences with this method of diagnosis as follows:

1. If one or more stones are present in such size as to cause symptoms suggesting operative measures, by careful and thorough examination, such can nearly always be shown by X-rays; also where stones are present when the symptoms do not indicate operation.

2. In most cases the size, shape, and position may be relied on where the shadows are shown to diagnose, whether kidney or ureteral stones. In cases where doubt may rise about the shadows, the examiner's experience will decide the matter; if not, stereoscopic radiography and ureteral bougies can be used to assist in diagnosing the case.

3. A negative diagnosis can only be assured when the whole region is carefully examined on both sides, and when the plates are of proper quality to differentiate the soft structures in those regions, and are carefully exposed and developed.

4. Without an efficient examination by X-rays, operation or prolonged medical treatment cannot be justified.—*Lancet*, June 26, 1906.



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